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ABSTRACT

This study examined the benefits of Head Start to children entering elementary school, assessed Head Start benefits to their parents, and described the characteristics and services of the Head Start program. Data were collected from a sample of Head Start graduates located in 32 sites selected to represent Head Start programs throughout the country. A comparison group of children enrolled in the same public school classrooms as the Head Start group was also selected in order to compare the status of Head Start graduates with their classmates. Data were collected from the parents in both groups, from the elementary school teachers, and from the Head Start Centers that the graduates attended. This report is organized in four sections: (1) background and procedures of the study, (2) data from delegate agencies and their Head Start Centers and results of the survey of the Head Start Centers which the sampled Head Start graduates attended, (3) parents' perceptions of Head Start, and (4) analyses of Head Start benefits to children. Approximately 50 pages of appendices are included. (Author/JMB)

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A NATIONAL SURVEY OF HEAD START GRADUATES AND THEIR PEERS

March 15, 1978

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READER'S GUIDE TO THIS REPORT

The data analysed for this report were obtained from several different instruments, from different sets of respondents and from several different samples. Data were obtained from Head Start Delegate Agencies about the centers they sponsored. Further information was obtained from the Head Start centers which the sampled Head Start graduates had attended. This information provides the basis for a report on the organization and processes in the Head Start program. Data were obtained also from the parents of Head Start graduates regarding their perceptions of, and activities in, the Head Start program. These data provide information for the description of the relationship of the Head Start program to parents. Finally, data were obtained from various sources, including Head Start graduates and their peers, which assessed the benefits of the Head Start program to the child. Recognizing that the complexity of the elements of the data base may leave the reader confused in progressing from chapter to chapter, we provide a brief outline of how the different segments of the data are organized and reported in this volume.

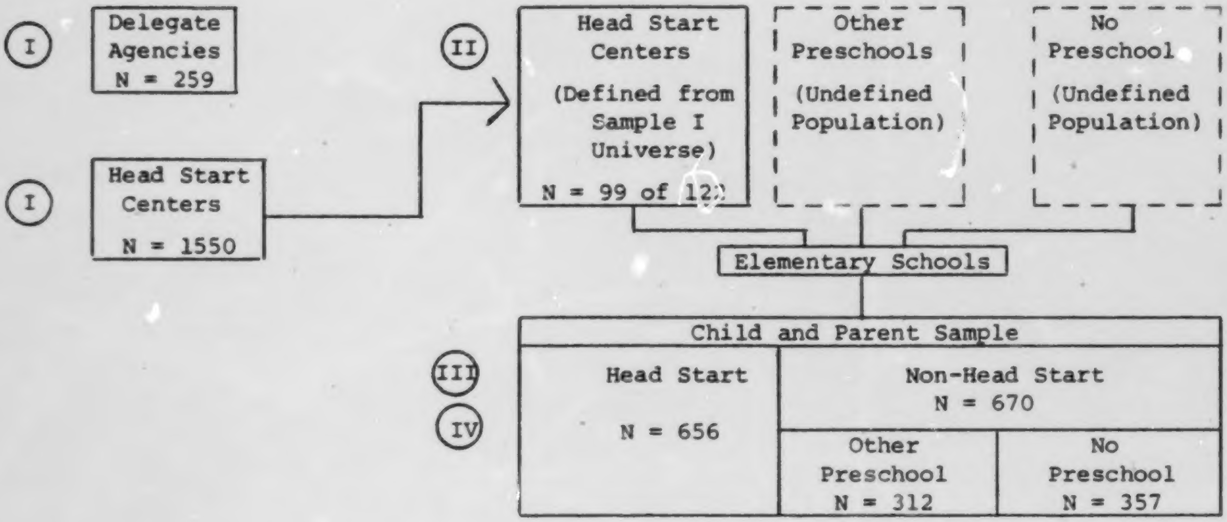
The chapters of this report are organized into several major sections; each section contains data or information on a common topic, together with the appendices appropriate to that topic. The sections are clearly separated, and may be read as separate reports. The contents of these sections are organized as follows:

SECTION		CHAPTER	CONTENTS
I.	Background and Procedures	1.	Introduction
		2.	Plan of Research
		3.	The Sample Design
		4.	Field Operations
II.	Head Start Organization	5.1	Head Start Delegate Agencies
		5.2	Head Start Centers
III.	The Relationship of Parents to Head Start	6.	Parents' Reports of Head Start
IV.	The Relationship of Children to Head Start	7.	A Description of Social Competence in Head Start Graduates
		8.	A Comparison of Head Start Graduates to their Peers at Elementary School Entry

The analyses and discussion within these sections are based on different segments of the data base. In an effort to quickly orient the reader to the source of the data contained in any single chapter, and how that data source relates to the entire data base, we present, below, a summary of the groups involved in the two major sampling activities, the final numbers of subjects incorporated within the analytic samples, and the instrument set upon which the analyses are based. A copy of this table, identifying the source(s) of data upon which the analyses are based, will be included at the beginning of each section.

SAMPLE I:
Delegate Agencies

SAMPLE II:
Children and Parents


I
Delegate Agencies N = 259
I
Head Start Centers N = 1550
II
Head Start Centers (Defined from Sample I Universe) N = 99 of 122
Other Preschools (Undefined Population)
No Preschool (Undefined Population)
Elementary Schools
Child and Parent Sample
III
IV
Head Start N = 656
Non-Head Start N = 670
Other Preschool N = 312
No Preschool N = 357

INSTRUMENT SET
I. Delegate Agency Survey
II. Head Start Center Questionnaire
III. Parent Interview
IV. Child Test Battery

SECTION I

In Section I, we present the background and procedures of this study. Chapter One contains a Summary of findings, a description of the Head Start program, and a history of the study. Chapter Two presents the Plan of Research, Chapter Three the Sample Design, and Chapter Four discusses the Field Operations.

CHAPTER ONE

INTRODUCTION AND SUMMARY

1.0 PURPOSE OF THIS REPORT

The purposes of this study are to examine the benefits of the Head Start program to children at their entrance to the first year of elementary school education, to assess Head Start benefits to their parents, and to describe the characteristics and services of the Head Start program.

The data presented in this report were collected from a sample of Head Start graduates located in 32 sites selected to represent Head Start programs throughout the country. A comparison group of children who were enrolled in the same public school classrooms as the Head Start group was also selected in order to compare the status of Head Start graduates with their classmates. Data were collected from the parents in both groups, from the teachers, and from the Head Start Centers that the graduates attended.

1.1 Results of the Study

This section presents a summary of the findings of this study with respect to: Head Start effects on children and parents; the characteristics and services of Head Start centers; and the utilization of the ex post facto design as a method for examining the potential benefits of Head Start.

1.1.1 Head Start Benefits for Children

DOES PROJECT HEAD START ENHANCE THE SOCIAL COMPETENCE OF CHILDREN?

- For black children, particularly from lower income families and from the southeast region, the evidence suggests that Head Start graduates are academically better prepared for school then they would have been without the program. No such effect was discovered for white children.
- At entry to elementary school, teachers tend to rate Head Start graduates, both black and white, as more active, less inhibited, more gregarious, and more aggressive in both sociable and non-sociable ways. This pattern of behavior is interpreted in this report as indicative of children who have an eagerness and a readiness to learn.

A stereotyped view of Head Start in the eyes of the public is that the program is primarily intended as a quick preparation course for elementary school academic performance. The history of the program and the current attitudes of Head Start center directors, with their emphasis on self-esteem and motivational attitudes, clearly belie this assumption. Yet, the question of academic school readiness of Head Start children remains a frequent issue. For blacks, the evidence suggests that Head Start graduates are academically better prepared for school than they would have been without Head Start attendance. Compared to their peers who had remained at home prior to elementary school, black Head Start graduates scored significantly higher on the Wide Range Achievement Tests. The achievement scores of Head Start and non-Head Start groups were compared within various categories of demographic characteristics. Black Head Start graduates who live in the southeast region, who come from single parent families and who come from low income families (income of less than $2500) scored higher than expected when compared to their peers.

Unlike black children, the white Head Start and non-Head Start groups differed on the levels of their background characteristics. The non-Head Start group came from families with higher incomes, higher levels of education, and fewer single-parent families. This condition, combined with the heterogeneity of regression of scores on background variables prohibited a rigorous comparative analysis. A less rigorous analysis comparing white children directly matched on a series of background variables indicated no systematic difference between Head Start graduates and their peers in academic school readiness. Within the limitations of these data, we conclude that white children in Head Start, compared to other children in their classrooms, derive no clear benefit to the academic aspect of their social competence in the school setting.

A number of child-response and teacher rating measures were used to assess the child's interest and motivational orientation toward school, and the child's style of adaptation to other children and adults in the classroom. In the separate analyses of blacks and whites the same pattern of differences appeared between the Head Start graduates and their peers with no preschool program attendance. Head Start children tended to be higher on proximity and attention-seeking; less conflicted in these types of behaviors; and higher on hostility/aggression behaviors. These behaviors suggest children who are comfortable in the classroom setting, and who have an eagerness and readiness to learn.

This pattern was observed by directly comparing Head Start and non-Head Start children matched (one variable at a time) on a number of background factors such as sex, regional distribution, mothers' education, income level and family composition. The fact that these differences tended to appear as a pattern for both blacks and whites across a variety of these background conditions suggests that such behavior may be characteristic of Head Start graduates.

1.1.2 Head Start Benefits for Parents

DOES HEAD START BENEFIT THE PARENTS OF HEAD START CHILDREN?

- Yes; in general, on a number of dimensions Head Start parents report high endorsement of the program, the services they have received from the program, and their involvement in the program activities.
- There is a high level of reciprocal contact of staff visiting in the parent's home and of parents visiting or volunteering in the Head Start classrooms. The program facilitated the parent's understanding of the child's learning experiences in the first year of elementary school.

Head Start parents report benefits they received from the program in the provision of medical and dental services and in a greater knowledge of the provision of better nutrition and personal hygiene practices for their families. This is particularly true for low income families within the Head Start group.

Head Start parents report, also, an active involvement in center activities and an increased understanding of the processes of child learning and development. They also report some benefits in terms of becoming active and involved in their children's school activities and in help that they received in getting to know more about their child's school and teacher.

In the area of Social Services, however, parents report very little assistance from the Head Start programs in helping them to find jobs and to further their education. This study, however, provided only a very limited survey of the Social Service area.

DO HEAD START PARENTS REPORT PROGRAM BENEFITS FOR THEIR CHILDREN?

- Yes; Head Start parents very highly endorse the program experience and report benefits on a number of dimensions for their child's health, nutrition and social development.
- Head Start parents highly endorse the program as being helpful to their children and to themselves. It is a program to which they would send their younger children.

The parents of Head Start children highly endorse the Head Start program for their child and for their younger children. This is particularly true of the lower income, less well-educated parents for whom medical and dental services, and nutrition and personal hygiene training are seen as beneficial. They see the program as being very good training for the child's growth in social interaction with peers and adults and preparing them for school. They do not see Head Start as doing very much in the area of academic development, although the study could not assess whether the parents felt this was appropriate. This finding on the training provided by the programs reflects the curriculum orientation expressed by the Head Start centers.

DID HEAD START BENEFIT THE PARENTS OF HEAD START CHILDREN COMPARED TO THE PARENTS AND FAMILIES OF NO PRESCHOOL CHILDREN?

- Maybe; there is a tendency for black parents to report higher verbal exposure for the child in the home; that is, they report more books available and more reading to the child. There are also higher expectations for the child in black Head Start homes than No Preschool homes. No such tendency was discernible for white parents. In other areas of parental and family attitudes, no differences were ascertained.

The analysis which compared parent responses from the two groups could not be conducted in a rigorous manner. First, there was not enough variance between the Head Start, No Preschool groups on the outcome measures; and second, there was too much variation in background characteristics to make a direct comparison methodologically meaningful. Patterns established by using a judgemental comparison of groups within a variety of background conditions do indicate some tendency for Head Start benefits for black parents, although the inference of Head Start as a determining factor is very weak.

1.1.3 Head Start Center Characteristics

- The regional distribution of Head Start centers corresponds closely with the distribution of the poverty level population.

- The ethnic composition of the Head Start program shows twice as high a percentage of blacks (55.3%) and Hispanics (15.3%) children in Head Start as their respective proportions in the U.S. poverty level population. The percentage of white children is roughly half their proportion in the poverty population. Thus, if the needs of the nation's children and families are defined by poverty and minority status, Head Start may be seen as responsive to both. On the other hand, the relatively smaller proportion of whites may suggest the need to expand these services to low-income white families.

- Head Start centers reported that about 60 percent of the enrolled children were four years of age; the remainder were evenly divided between three- and five-year-olds. In regions where kindergarten programs are not mandated, Head Start serves a larger proportion of five-year-old children.

- The ethnic composition of Head Start center staff demonstrates that blacks and whites are evenly distributed within staff positions. However, the total staff ethnic composition does not match the respective proportions of black and white children, with black staff being underrepresented.

1.1.4 Head Start Program Description

- Head Start center directors overwhelmingly endorse self-esteem and social skill development as the priority curricular goals of the program. The program philosophy, uniform throughout the country, has remained unchanged over the last decade. This curriculum philosophy differs from the priority for cognitive development often voiced by policy makers and the public at large, and also from the Head Start center directors' perception of the academic priorities of elementary school.

- Most centers provide similar enrichment experiences for Head Start children; major variations in the pattern of activities are explained by the availability of resources in the location of the Head Start centers.
- Head Start programs provide children and families across the country with a full range of health and social services. Where community services are available, they are extensively used by Head Start programs.

1.1.5

IS EX POST FACTO ANALYSIS AN EFFECTIVE METHOD FOR DETERMINING THE EFFECTS OF HEAD START ON CHILDREN AND PARENTS?

Posttest-only evaluation designs are a poor bet for producing data appropriate for national Head Start policy issues. Only where sufficient data are available on background characteristics relevant to the outcome measures and potential selection biases can program effects be estimated free from other competing hypotheses. These measures must be known in advance to correlate with the outcome measures in order to use statistical adjustment techniques.

1.2 HEAD START PROGRAM GOALS*

The overall goal of the Head Start program is to foster social competence and optimal functioning in the children of low income families. The performance standards for Head Start as set forth by the Office of Child Development acknowledge the interrelatedness of intellectual development and other factors that influence a child's development, such as medical and nutritional needs and the educational, psychological and emotional climate in the home and community. To encourage and facilitate development of the "whole" child, the performance standards mandate that Head Start should be a comprehensive, interdisciplinary program designed to deliver a broad range of social services, and that the program should involve families and communities as well as children.

The Head Start program performance standards provide for:

1. The improvement of the child's health and physical abilities, including appropriate steps to correct physical and mental problems. The improvement of the family's attitudes toward future health care and physical abilities.
2. The encouragement of self-confidence, spontaneity, curiosity, and self-discipline, which will assist in the development of the child's social and emotional health.
3. The enhancement of the child's mental processes and skills with particular attention to conceptual and verbal skills.
4. The establishment of patterns and expectations of success for the child which will create a climate of confidence for present and future learning efforts and overall development.
5. An increase in the ability of the child and family to relate to each other and to others.
6. The enhancement of the sense of dignity and self-worth within the child and his family.

The performance standards describe and specify general conditions for compliance with the goals and objectives of the overall Head Start program and conditions for compliance with each of the four basic components of the Head Start program which are Educational Services, Health Services, Parent Involvement and Social Services. The performance standards further specify that parent involvement should be integrated into all components of the Head Start program.

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*Adapted from Head Start Programs Performance Standards, Federal Register, Vol. 40, NO:126, Monday, June 30, 1975, p. 27563.

1.3 HEAD START: THE NATIONAL PROGRAM STRUCTURE

A general description of Head Start as a national program will help the reader to comprehend some of the factors that have influenced this study.

The Head Start program was implemented in the summer of 1965 as an attempt to provide preschool educational and social services to poor and minority children. The initial program philosophy, as expressed by the architects of the program, was to present a variety of services to enhance the general development of the child. In turn, the objectives of such programs were viewed as general in nature, encompassed eventually by the term "social competence." Guidelines for the program do not set forth an agreed upon set of goals and a curriculum for a preschool program. Rather, the program is to provide a preschool experience through processes which are determined on the local level. Each program (Delegate Agency or Head Start Center) decides its own orientation and emphases within the guidelines and services specified by the policy promulgated by the central federal office. This approach has a variety of implications for understanding the program and for understanding the study. On a national basis, Head Start is not a program; that is, the broad goals set forth in the performance standards do not constitute a program in the sense of a uniform set of experiences, since there are so many local program configurations which address the goals. Thus, there is no one way of describing a functioning Head Start program on a national basis. The national office develops overall policy guidelines; operationally, local programs at each level (Grantees, Delegate Agencies, Centers) have almost complete autonomy within the established guidelines. This autonomy extends not only to matters of curriculum content and process, but also to participation in studies and evaluations, such as the current project.

On the federal level, the national program offices are housed within the Office of Child Development, Office of Human Development, U.S. Department of Health, Education and Welfare; regional office staff, located in the ten HEW regions, are a part of the federal structure. A special regional designation, Region XI which has responsibility for migrants and Native American programs, is housed in Washington. On the local level, the structure is composed of Grantees, Delegate Agencies and Centers.

Grantees are those public or private non-profit agencies which are granted assistance (i.e., funded) by OCD to carry on a Head Start program. In turn, the grantee may delegate to a public or private non-profit organization or agency, the responsibility of carrying out all or part of its Head Start program. These organizations or agencies are appropriately called Delegate Agencies.

The Head Start Centers are those facilities through which the Delegate Agency (or Grantee) implements the program. Each Center has one or more classrooms, although not all classrooms need to be physically housed within the Center. Each Center has its own staff, composed minimally of a Center Director, teachers, social service worker and various specialists, either as full or part time employees or as consultants.

The Head Start Performance Standards provide that "Head Start programs will be permitted and encouraged to consider several program models in addition to the standard Head Start model and select the program option best suited to the needs of the children served."* These options are:

- The standard Head Start model;
- Variations in Center attendance;
- Double sessions;
- Home-based models; and
- Locally designed variations.

This study limited the programs studied to full year standard Head Start model programs.

In the academic year 1976-1977, the Head Start program served approximately 349,000 children. There were approximately 1,233 full year grantees, and 161 summer grantees. Full year Head Start programs served approximately 292,000 children; summer Head Start programs served approximately 46,000 children. The FY 1977 appropriation for full year and summer programs amounted to $447,642,000. In FY 1977, the number of professional staff employed in the Head Start program was 21,400 for full year projects; for summer projects, the number of professional staff was 3,450. Non-professional staff for full year programs numbered 35,600 and for summer programs 5,765. It is also reported that volunteers numbered, for full year programs, 85,000 and for summer programs, 9,500.

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*Federal Register, Vol. 40, No. 126. Monday, June 30, 1975, p. 27568.

1.4 FINDINGS FROM PREVIOUS STUDIES: A BRIEF SUMMARY

Since the founding of the Head Start program, there have been many evaluations and studies of the Head Start program. Generally, however, the research has been based upon data from one or a few sites, and have not been national in character. These studies include studies of individual Head Start programs and descriptive studies dealing primarily with the issue of compliance of programs with Head Start guidelines. These constitute the bulk of the evaluations performed on Head Start. Other evaluations include national studies designed to get at the overall impacts for effects of the Head Start program and national studies of specific programs, their characteristics and their relationship to outcomes.

Studies have shown that the programs have been in compliance with performance guidelines. Such studies have indicated also that there is a great deal of variation in program administration and in-service components. In terms of national impact evaluation studies, only one study has been of that character; namely, the Westinghouse-Ohio Study of 1969. Other evaluations done on a national basis have been studies of variations of the Head Start program, such as the Home Start program and the Planned Variation program. The latter national evaluations have been performed to assess the impact of particular curricular variations upon outcomes. Therefore, most of the information about the impact of Head Start programs upon children, families and community is provided by the smaller studies such as research reports on single sites and by dissertations.

The following paragraphs summarize the general findings of these research and evaluation studies. This summary is not meant to be exhaustive, nor does it reflect the often controversial nature of the interpretation of findings.* Although the Head Start program states in its guidelines that it is a program designed for the development of social competence in children and is not limited to cognitive development, early assessments of the Head Start program focused upon its cognitive benefits. Studies have shown that both in terms of measured intellectual gains and academic achievement, Head Start programs provide a positive gain for their participants (Stearns, 1971; Barrett, 1968; Hulan, 1972; Bissell, 1971; Shipman, 1972). More specifically, these cognitive gains are to be found in full year programs rather than in summer programs (Jackson, 1970; Barnow, 1974). It should also be pointed out, however, that other studies have shown that these gains tend to disappear over the first few years of school experience.

In terms of the assessment of the social development of children, the data from a variety of studies indicate that it has not been possible to assess adequately this development. These studies show that varying program contents, parental factors and other variables have an impact on the development of such aspects of social development as achievement motivation (Research Triangle Institute, 1972). However, the most that previous studies have indicated is that participation in the Head Start program has a positive impact on the development of socially mature behavior in children and that Head Start facilitates the socialization of the child (Enmerich, 1973; McGee, 1972).

Head Start may have an impact upon the parent. There are reported improvements in parenting abilities and in the approach to parenthood, as well as a greater satisfaction with the educational gains of their children in Head Start parents (Bromley, 1972). Studies also indicate an increase in positive interaction between mothers and their children and increased parent participation in later school programs (Lewis, 1968). Finally, studies have indicated that Head Start has a definite positive impact on child health. Such factors as lower absenteeism in public school, more immunizations, better nutritional practices and, in general, better health of Head Start graduates are to be found when compared to the non-Head Start group (Geesaman, 1971; Michelson, n.d.).

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*Recent summaries of Head Start studies are available in Ada Jo Mann, et al., 1976, and Lois-Ellin Datta, n.d.

Relationships between certain characteristics of the child and his family and outcome variables have been found. Among these were the fact that young children performed better on cognitive tasks, but did not appear to be as well adjusted socially. A relationship is also found between outcome measures and whether or not children came from single-parent or from two-parent families. In the only other national impact study performed, it was found that there was a regional and ethnic variation; Blacks from urban areas and Blacks from the southeastern region of the country showed better cognitive performance. Other factors related to outcome variables were the verbal climate of the home (those children who were more frequently read to), prior Head Start experience, and parents who were relatively less pessimistic about their life chances. Children whose parents, particularly the mother, had high aspirations for their children's performance tended to perform better than other Head Start children (System Development Corporation, 1972; Research Triangle Institute, 1972; Datta, n.d.).

In summary, while the results are equivocal, studies have shown that children enter Head Start low in achievement, in scholastic readiness and in general learning ability. At the end of their Head Start experience, they tend to have a higher degree of motivation, show greater scholastic readiness, and show some modest gains in learning ability. Parents were also affected, and showed more favorable attitudes toward education and improved parent-child behaviors.

1.5 HISTORY OF THE STUDY

1.5.1 The OCD Procurement

In the spring of 1975, the Office of Child Development announced a Request for Proposals (RFP) to perform an "Evaluation of the Transition of Head Start Children Into Public School."* This study was to be the first in a new wave of investigations designed to assess the impact of Head Start upon children, families, and communities. As the first study, it was to present an overall picture of the impacts the program had upon participants on a national basis. Future studies would focus specifically upon those sub-areas which were the major performance standards specified in the Head Start guidelines.

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*RFP HEW/OS 141-75.

The RFP stated that the goal of the evaluation was "to find out how Head Start influences children's transition into public schools."* The evaluation was planned as a two-year study, the first year of which was a pilot phase for addressing the problems of methodology, preparation of measures, and the definition and selection of a "nationally representative Head Start sample" and an "appropriate comparison" group. Year two would constitute the full scale evaluation; data were to be collected both at the beginning (fall) and end of the year (spring) from both groups of children. However, the RFP also suggested that "data will be collected on the full sample both in the fall of 1976 and in the spring of 1977, unless OCD decides otherwise for cost or other reasons."**

The RFP specified that data should be collected from at least four sources in order to answer the evaluation questions:

1. Head Start programs;
2. Parents;
3. Teachers and schools;
4. Children.

Instrument development was not encouraged, and wherever possible and appropriate, existing measures were to be used.

1.5.2 Objectives of the Abt Associates Proposal

On May 22, 1975, Abt Associates submitted a proposal to perform the evaluation suggested in the RFP.* The proposal specified the need for a pre-post design and proposed that, in addition to the questionnaire and rating scale data, direct testing of the children should be performed. This direct testing was to include tests of academic performance and tests which would measure socio-emotional areas. Other measures proposed included a parent interview, teacher rating form of child behavior, teacher questionnaire, and Head Start Center questionnaires.

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*RFP HEW/OE 141-75, Work Statement, p. 1.

***Ibid*., p. 12.

***Abt Associates Inc., #2428, May 22, 1975.

A sampling plan that conformed in most respects to the specifications in the RFP was proposed. This sampling plan was multi-staged, i.e.:

1. Select sample of sites;
2. Select sample of Head Start programs within sites;
3. Select sample of centers from programs;
4. Select from each sample center a sample of children (e.g., graduates);
5. Trace sample to kindergarten classroom;
6. Within each selected classroom, choose a comparison group of children.

The contract to perform the evaluation was awarded to Abt Associates Inc., effective July 15, 1975.

1.5.3 Implementation of the Study

After the award of the contract, meetings were held between the Project Officer and Abt Associates personnel. Focus of these meetings was to define and refine the elements of the study. A prime consideration of these discussions was the sampling approach and the information necessary to conduct the sampling procedure.

The sampling plan suggested in the RFP was to select a random sample of Head Start programs (Delegate Agencies), and from these programs a sample of Head Start graduates who would be traced to the schools they would be attending in the fall of 1976. Further discussions suggested the inappropriateness of this approach. The conclusions finally reached are best illustrated through reference to portions of memoranda developed as internal project documents.*

"1. Basic objectives for the sampling plan:

   A. The sample will be nationally representative of the approximately 1,300 Head Start programs (Delegate Agencies).

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*Study documents, both dated August 1975.

The emphasis on a nationally representative sample implies that we are not prepared, at this time, to specify any particular Head Start program characteristics. Thus, when prioritizing decisions, we will place the analysis of Head Start program features below the primary interest of the national impact of Head Start. Issues of central analytic power on any one issue by stratifying the sample with respect to it, would be to risk distorting the nationally representative character of the study.

B. The sample will ensure equal (i.e., real-world) probability of selection for both Head Start graduates and the designated comparison group.

This condition implies that children will ultimately be selected by an approach through the public schools and classrooms, rather than selected in Head Start centers and traced into kindergarten. If the former approach is taken, the two groups will be independently sampled, thus remaining more representative of real-world conditions.

There is an important analytic reason for the two groups being independent. We would like to make an inference about the impact of Head Start, but we are caught in a post-hoc design wherein the groups have not been randomly assigned prior to Head Start. Thus, this inference about Head Start impact is meaningful only if we can demonstrate that the Head Start and non-Head Start groups in our study are equivalent in all important respects. If they are, we have more confidence in our inferences about Head Start impact. If the groups are not equivalent, we cannot make the much desired inferences about Head Start impact. This latter condition was the dilemma of the Westinghouse study which prompted much severe criticism (e.g., Campbell, et al.).

If the Head Start and non-Head Start groups represent independent, although different, samples from the real world of kindergarten, we may not be able rigorously to infer the impact of Head Start, but at least we can define, in terms of a survey, the similarities and differences in kindergarten social competence which obtain in two segments of the kindergarten population. Such a survey can have policy relevance. It provides a legitimate back-up analytic strategy which was not possible in the Westinghouse sampling strategy.

We are all agreed that the ideal evaluation of the current Head Start program would require a fully randomized experimental design (i.e., the random assignment of a proper sample of "eligible" children to the "treatment-Head Start" and "control-non-Head Start" groups). Given the constraints that now exist, both internal and external, such a design is not feasible.

Given the resources and options that are available, the most statistically conscionable alternative seems to be a longitudinal study (measurement at two (three) time periods) of two groups of children; those who have been through Head Start programs, and those who have not been through Head Start programs, but would have been eligible to be in such programs. While we might be tempted to attribute differences between these two groups to the application of the "Head Start treatment," such assignment of causation will require two stages of inference. The first stage of inference will be strictly objective; from the sample of the two cohorts to the entire cohort populations. The second stage of inference must be strictly subjective; we must be willing to assume that the eligible-non-Head Start cohort and the Head Start cohort are essentially the same, and the fact that some children were exposed to the "Head Start treatment" while others were not, is a random phenomenon.

... if we or others are unwilling to accept the second assumption, we still retain a representative sample of two cohorts which can be compared in a legitimate fashion. This seems more preferable to a design strategy which would attempt to select a pseudo-matched control group of eligible non-Head Start children. Such a design would not yield a proper sample of the eligible non-Head Start cohort, and would require the acceptance of a rather dubious assumption in order to produce any valid comparisons.

Two methods of selecting a sample of kindergarten children in the Head Start and eligible non-Head Start cohorts have been suggested. One of these methods calls for the selection of Head Start programs in stage one, followed by the selection of Head Start children within programs at stage two. The selected Head Start children would then be traced to the kindergartens they currently attend. In these kindergartens, we would also select a sample of eligible non-Head Start children. This proposed design has two major flaws. First, the tracing of Head Start children to the kindergartens they currently attend will be quite difficult and in many cases impossible. This attrition, which will be followed by within school non-cooperation, is likely to produce unacceptably low overall completion rates.

> Second, it will be impossible to select an efficient probability sample of the non-Head Start cohort via this design. In order to establish the probability of having selected the kindergartens actually selected, we must be able to trace-back all Head Start children to their Head Start centers and then compute the probability that any one of these centers was selected. While this task is not impossible, we will be faced with a situation in which the selection probability for classrooms is not equal over all kindergartens. As a result, the sample of eligible non-Head Start children will require possible extreme weighting to correct for unequal selection probabilities. This will result in a highly inefficient sample (i.e., the effective simple random sample size might be as low as 10% of the actual sample size).
>
> The second proposed method would select, via several stages, a sample of kindergarten classrooms. From these classrooms, we would select a sample of Head Start and eligible non-Head Start children."

It was decided, as a result, to sample children from the classrooms in schools which Head Start graduates normally attended. The sampling procedure was to obtain from a stratified (by region, ethnic characteristics of children served, city size) sample of Head Start programs a listing of schools Head Start children attended, identify a subsample of these schools, select a sample of classrooms and within these classrooms select a sample of Head Start and comparison children.

To implement the sampling process certain information was necessary. Such information included names of centers, characteristics of children served (size, ethnicity), geographic location (urban, rural) and other basic information. Such information was not available. Therefore, a special survey had to be instituted. This survey was performed on a sample of Delegate Agencies;* the data requested was of center characteristics, location, size, ethnic character of children served and the schools which the center graduates normally attended. Since this was a survey of more than nine respondents, clearance of these data collection forms and all other instruments, as well as the plan for the entire study had to be approved by the Office of Management and Budget (OMB). The instrument package for OMB to review was submitted in January 1976. Unfortunately, and for a variety of reasons, approval from OMB was not obtained until May, 1976. In effect, this meant that the Delegate Agency survey could not be accomplished before the end of the school year, by which time both public schools and many Head Start centers would be closed. A special effort was mounted, but it was not until July that an adequate response was achieved. By this time, of course, it was too late to enlist the cooperation of public schools for fall 1976 testing.*

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*See Chapter 3 for a more complete discussion of the sampling procedure.

Site development began with contact by letter in August followed by field visits in September and October. (The original work plan had anticipated OMB approval by the beginning of April, site development in April and May, rostering of classrooms over the summer from pre-registration rolls, final rostering when school opened and testing three to four weeks after school opened.) The process of obtaining parental permission for participation in the study was implemented and final selection of students made. Data collection began in November and December. Data collection was proceeding well until the devastating winter of '76-'77 began in earnest. Across the country schools were closed for weeks, roads became impassable, public transportation was non-existent and, in general, for many of our sites, data collection became impossible. Under those conditions data collection could not be completed until after the Christmas school vacation.

The problems cited earlier with site development and data collection raised costs beyond original expectations. Consequently, the Office of Child Development decided to cancel T_2 (Spring 1977) data collection. This decision drastically changed the nature of the study. The design was changed to a post-only study with an ex-post-facto analysis strategy. The impact of the design change will be discussed further in later sections of this report. However, it should be noted here that the design change also had an impact upon the data collected and upon their suitability for analysis purposes. Namely, the data collection instruments were designed for pre-post measurement; the change to the post-only design caused some items to be less analytically effective and raised questions as to the applicability of some instruments for an ex-post-facto analysis.

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*The original project work plan proposed to collect initial rosters of children in the spring of 1976 during the time children were being registered for the upcoming academic year.

Finally, in performing the analysis of the data, two decisions were made which had an impact upon this report. First, approximately half of the comparison group of children had experienced some other preschool program other than Head Start. It was decided, jointly between OCD and Abt Associates staff, that a more equitable assessment of the effects of the Head Start program would be provided by a comparison with the group with no such preschool experience. Since no data were collected on the nature of other preschool programs, a direct comparison of the children with other preschool would be difficult to interpret and not within the purview of the study. The result of this decision was to decrease the size of the comparison group.*

Second, in the analysis it was found that the match between the comparison group and the Head Start group was differentially successful. For Black children the Head Start and no preschool groups matched well; for White children the two groups were so poorly matched that neither a direct comparison nor the use of adjustment techniques was feasible. The match between Black and White children, both in the Head Start group and the comparison group, was very poor, motivating the analytic strategy of separate analyses for each group.

1.6 IMPLICATIONS FOR AND CONSTRAINTS UPON STUDY RESULTS

The previous sections have briefly discussed the overall objectives of the study, the history of the project implementation and modifications in original study design and operations. These changes have direct implications for the study and place constraints upon the conclusions which can be drawn from the study. Throughout the remainder of this report, we will attempt to remind the reader of these limitations and constraints; we urge the reader to carefully consider the abuses which may be caused by taking the data beyond the point of their limitations. In summary, we emphasize that

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* It should be noted that the existence of such a large group of children with some other preschool experience may provide a commentary upon the impact of the Head Start program. The number of children who have experience in preschool programs suggests a latent function of the development of Head Start: that Head Start provided the impetus for the need and utility of such programs and helped to legitimize such programs in both the public and private sectors.

- The study design is post-test only.

  Since the study was originally designed for pre-post measurement, data collection instruments were designed for this original purpose. As a result, some measurement instruments may be less appropriate for post-test only design. In addition, this design limits and constrains the utility of the findings in testing for the benefits of the Head Start program. Consequently,

- This study provides an implicit examination of the utility of a post-test design and ex post facto analysis for study of the benefits of Head Start programs.

  It is important to recognize at the outset, however, that an ex post facto analysis does not in any sense suggest a causal inference between groups. We must therefore advise caution in the interpretation of these data.

- The study is not an experiment; it is a survey.

  Inappropriate controls over randomization, problems with data collection, and the loss of the pre-post design imply that one should consider this study as a survey of Head Start rather than as a controlled experiment. This interpretation cautions further against making causal linkages in the data.

- There is differential success of matching the Head Start group with the comparison group.

  As noted above, the match on demographic characteristics is better for Black children than for White children. As a result, caution must be taken in comparing and interpreting the comparative data, particularly among White children. Further caution is advised in drawing conclusions in comparing White and Black children. This report, in fact, does not attempt to make such a comparison because of the significant differences in characteristics which do exist.

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CHAPTER TWO

PLAN OF RESEARCH

2.0 INTRODUCTION

The design employed in this study and the procedures are summarized in this section. The discussion includes the experimental design, sample selection, data collection, data reduction and statistical analysis procedures.

2.1 STUDY DESIGN

The design for this study is post-test only, since, as explained in Section I, the data collection period in the spring of an original pre- post-design, for fall 1976 and spring 1977, was cancelled. The experimental group consists of children who graduated from Head Start programs in May or June of 1976, and their parents. A comparison group consists of children who are pupils in the same classrooms, and their parents. These children are further classified as those who have had some preschool experience other than Head Start, and those children who have had no preschool experience. For this study, the comparison group used for analytic purposes is the non-preschool group.

2.2 SAMPLE

The measurement battery was administered in 32 Head Start sites. These sites were selected by stratified random sampling plan; within sites, schools and classrooms were selected on a random basis tempered by such practical considerations as the number of Head Start graduates available. Final selection of experimental and comparison children was dependent upon the number of children whose parents gave permission to take part in the study. Selection of the final sample of participants was random within site where numbers permitted; however, in most cases the final selection was non-random, depending upon parental permission. This dependence and the exclusion of the comparison group who had some preschool experience may account in part for the poor match between the Head Start group and comparison group among Whites. While significant Head Start/ comparison differences exist in the demographic characteristics among Whites, almost no significant differences exist among Blacks.

The primary caretakers of the children selected for the study, the classroom school teachers of the students, and the Head Start Centers were included as sources of data for the study.

2.3 MEASUREMENT BATTERY

Ten measures comprised the data collection battery, including four child tests, two rating scales completed by the classroom teacher, one rating scale completed by the tester, one parent interview, a teacher questionnaire and a questionnaire completed by Head Start Center personnel. The measures used were:

- Wide Range Achievement Test
- Values Inventory for Children
- Motor Inhibition Test
- Friendship Choices
- Schaefer Classroom Behavior Inventory
- Beller Rating Scales
- Pupil Observation Checklist
- Parent Interview
- Teacher Questionnaire
- Head Start Center Facilities and Resources Questionnaire.

Figure 2.1 presents a matrix of the measurement battery and the Head Start performance areas they are intended to assess. Not included in Figure 2.1 are the Teacher Questionnaire and the Head Start Center Questionnaire. These data collection forms were not intended to assess Performance Standards areas, but to provide information on the environments which might affect child performance. A more detailed account of the variables employed in the anlysis is given in subsequent chapters which present the results of the analyses.

2.4 DATA COLLECTION

Data collection was conducted at each of the 32 sites by community interviewers, hired locally and trained by Abt Associates staff. There were two community interviewers in each site; additional data collection support was provided by Abt Associates staff. Such additional support

RELATIONSHIP OF MEASURES USED TO HEAD START PERFORMANCE STANDARDS

MEASURES	PERFORMANCE STANDARDS AREAS					
	EDUCATION		PARENT INVOLVEMENT	MEDICAL SERVICES	SOCIAL SERVICES	NUTRITION
	School Readiness	Socio-Emotional Development				
Wide Range Achievement Test						
Math	X					
Reading	X					
Spelling	X					
Values Inventory for Children						
Social Conformity		X				
Academic Motivation		X				
Me First		X				
Adult Closeness		X				
Sociability		X				
Asocial Behavior		X				
Motor Inhibition Test		X				
Friendship Choices		X				
Schaefer Classroom Behavior Inventory						
Task Orientation		X				
Extraversion-Introversion		X				
Hostility-Tolerance		X				
Expectations for Academic Achievement	X					

Figure 2.1

RELATIONSHIP OF MEASURES USED TO HEAD START PERFORMANCE STANDARDS

MEASURES	PERFORMANCE STANDARDS AREAS					
	EDUCATION		PARENT INVOLVEMENT	MEDICAL SERVICES	SOCIAL SERVICES	NUTRITION
	School Readiness	Socio-Emotional Development				
Beller Rating Scales						
Autonomous Achievement Striving		X				
Aggression		X				
Adult Dependency		X				
Child Dependency		X				
Dependency Conflict		X				
Pupil Observation Checklist						
Task Orientation		X				
Sociability		X				
Parent Interview						
Health and Nutrition						
Medical/Dental Visits				X		
Immunizations				X		
Nutrition						X
Head Start Assistance				X		
Provisions of Social Services					X	
Involvement in Center Activities			X			
Involvement in Public Schools			X			
Home Educational Climate			X			
Educational Attitudes			X			

Figure 2.1 (Continued)

was needed because of the effect this severe winter had on slowing down data collection efforts. Each site was monitored by Abt Associates field operations staff. Each site was visited at least once by Abt Associates staff in order to determine if field procedures were being properly observed.

Testing for the children was conducted in the school setting for both the group test (Values Inventory for Children) and the individual tests. Interviews with the parents were conducted in the home. Ratings of the child done by the teacher and the Teacher Questionnaire were given directly to the teacher and mailed back to Abt Associates. Information from the Head Start Centers was obtained through a questionnaire mailed to each Center Director and returned by mail.

Community interviewers returned all data to the Abt Associates main office in Cambridge, Massachusetts. All instruments were checked for completeness and obvious errors. Data for each family (parent and child) were kept in separate envelopes and each site was maintained as a separate testing entity. Teacher Ratings, Teacher Questionnaires and Head Start Center Questionnaires were maintained in separate site files. As materials were received, they were reviewed for quality and checked in through a centralized office staff procedure. Although data were stored by site, they were organized by test form for data reduction.

2.5 DATA REDUCTION

The data were reduced to machine readable form by Investment Data Corporation of Santa Monica, California, through optical scan procedures. All instruments were developed and designed by Abt Associates staff and formatted onto optical scan materials by Investment Data Corporation. Final formats were approved by Abt Associates project staff; printing was done by Investment Data. The only data collection instruments which were not processed in this manner were the Head Start Center Questionnaires and the Teacher Questionnaires. These were printed, coded and keypunched through Abt Associates. The data were recorded on magnetic tapes, checked for record length and range of value errors and returned to Abt Associates.

Further checks were performed by Abt Associates using computer programs to perform mechanical checks on the data.

Working files compatible with available statistical programs were prepared. Files were constructed for each respondent type, that is, child file, parent file, teacher file and Head Start Center file. A master file containing all of the data was created to allow for intercorrelational analysis. This master file was organized by child test with additional classroom and Head Start Center data added to each child's record.

2.6 ANALYSIS STRATEGY

Some of the evidence presented in this study is direct in character; that is, the data are reports of Head Start staff and Head Start participants with regard to the characteristics of Head Start centers, Head Start graduates, and the services provided to parents. This direct testimony or evidence does not involve the judgment of the respondents, nor does the evaluation of the evidence require substantial inference. The central question concerning the merits of this evidence rests on the credibility and representativeness of the respondents, the data gathering procedures and the presentation.

A great deal of the evidence reported in this study is circumstantial; that is, a subjective judgment made by the respondents (parents, teachers, and evaluators). The value of this evidence requires an inference concerning the causal linkage of a circumstance (Head Start participation) and an outcome (child and parent effects). Such evidence is very different from direct evidence in that the merits of circumstantial evidence rest not only with the credibility of the respondents and/or analytic treatment of the data, but with the credibility of the inference or judgment that links the circumstance and the outcome. The admissability of such evidence rests on the informed judgment of those most familiar with the Head Start program and the current data. Clearly, such circumstantial evidence must be augmented by the results of better-controlled studies in the formulation of Head Start policy.

In the best of experiments the analytic strategy is wedded to the interpretation strategy. The analytic strategy is based on certain assumptions required by the statistical tools. The interpretive strategy is based on the logic which connects the measurements of the study. This study, in the absence of a pretest measure or of random assignment of children to treatment groups, cannot unambiguously attribute a higher Head Start group score to the effects of Head Start. However, through a careful sifting of background differences, both statistically and judgmentally, we may reduce the degree of uncertainty that a group difference is due to the program under study and not solely to differences existing between the groups before the Head Start treatment. The results of this process are: to identify the areas where group differences are and are not observed; to specify the conditions associated with these differences; to develop tentative statements of Head Start benefits; and to clarify the kinds of variables required for further study to reduce the uncertainty of our conclusions about Head Start effects. For these reasons, the analysis logic and strategy utilized in this study were constrained so as not to misrepresent the limits of the data.

Analysis was performed initially upon the sample of Head Start centers, Head Start graduates and of the parents of the graduates. These analyses are descriptive, designed to present a picture of the Head Start world and of the factors which lead to differences in the Head Start experience. These data are presented through percentages and, in order to assess sources of possible variation, regression analyses are performed on the data characterizing the Head Start graduates and their parents.

Because subjects have not been assigned randomly to treatment groups, and because there are no pre-post tests between groups, a direct comparative analysis between the Head Start group and the no preschool group is not presented until the last analysis chapter. In this analysis two analytic approaches are presented. First, for Black children, where the correlations between background and outcome measures are sufficiently high to make adjustments, a "value added" analysis is performed. Second, a weaker analytic approach is used to make forced matched comparisons among the Head Start-no preschool groups for Blacks and for Whites.

What are the implications of the analytic approach for the use of the ex post facto design in Head Start evaluations? The following considerations are important:

- Were the outcome measures of social competence reliable enough to produce true-score variance?

YES. The reliabilities of the scales reported in the Appendix ranged close to .90. If they had been used as pretests, they would have provided adequate statistical adjustment.

- Was a representative set of background measures used to account for the outcome score variance?

YES. The measures of child characteristics, socio-economic indices, and family characteristics were similar to or more than those of other comparable studies.

- Were the appropriate relationships between background and outcome measures analyzed?

MOST LIKELY. The analysis treated background measures as independent "main effects" on the outcomes. It is possible that interactions between background conditions could account for outcome score differences otherwise obscured by main effects. However, such interactions are usually accompanied also by main effects, of which there were so few. The possibility should be examined, but the prognosis is not too positive.

- Did the Head Start program somehow act to eradicate or attenuate the expected relationships between background and outcome measures?

MAYBE. The data suggest that background status makes more of a difference in social competence scores for No Preschool children than for Head Start children. If this were true, then we might infer that Head Start has a positive, equalizing effect on child performance. However, in the absence of pretest measures, we cannot ascertain the extent to which this condition was also true before the children's Head Start experience.

CHAPTER THREE

THE SAMPLE DESIGN

3.0 INTRODUCTION

The sample of Head Start graduates selected for this study was designed to reflect the overall distribution of English-speaking Head Start children.* Sampling procedures were developed to ensure both a good geographic balance in the sample and a balance between children from urban and rural areas.

The nature of the population necessitated a relatively complex sampling algorithm. Head Start graduates are dispersed among many elementary schools and there is no central registry indicating where they may be. Thus, it would be extremely inefficient to choose a simple random sample of schools in order to select Head Start graduates because most of the sampled schools would have no Head Start graduates. That is, Head Start graduates must be viewed as a rare and relatively difficult to find elementary school population.

Thus it was first necessary to develop a list of schools that Head Start children attend. This was accomplished by first sampling Head Start delegate agencies and centers. Sampled agencies and centers identified those schools which Head Start graduates subsequently attend.** Once these schools were identified a subsample of these schools was selected for study. Within these schools a sample of classrooms*** was selected and within these classrooms a sample of Head Start and non-Head Start children were selected for the transition study. A more comprehensive description of the sampling process is contained in the following sections.

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*The non-English-speaking population amounts to only a small percent of the total population. To adequately represent this group in our analyses would have required a considerably increased scope of work.

**In a few instances sampled agencies could not supply this information and thus all of the local schools had to be canvassed.

***Classrooms were selected because some of the child tests were group tests to be administered at the classroom level.

3.1 PRELIMINARY DEFINITION: HEAD START AND COMPARISON CHILDREN

Since there are many types of Head Start programs and since not all children complete these programs, some operational definitions of a Head Start child are in order. We have defined a Head Start child as one who has attended a full year program. Summer programs are excluded. Similarly, children who attend Head Start classes for a short period and then leave were not considered Head Start children.

The primary reasoning behind these exclusions is not that Head Start will have no impact on these children. Instead, we are concerned with the insensitivity of the statistical analyses to be employed. These analyses are unlikely to detect the modest impact that a summer program or an otherwise short tenure in Head Start might produce in a child.

Note that the smaller the effect that we expect to measure, the larger must be the group of children that we study. Thus, it would require a considerable sample size to adequately study summer programs. Since the overall sample of Head Start children has been limited to approximately 900 by the basic resource constraints of this study, it is a more judicious use of resources to concentrate the entire sample on full year programs and thus increase the probability of detecting program effects, if there are any.

The limitations in the overall sample size has also led to the exclusion of all Head Start graduates who do not speak English. These children constitute a special subgroup and would have required a disproportionate allocation of resources for adequate study. It was determined that studying this non-English-speaking group would have seriously diminished our ability to adequately study English-speaking Head Start graduates who, after all, comprise the great majority of all Head Start enrollees.

This exclusion eliminated many Spanish-speaking children from the study plus a small number of children with other linguistic backgrounds. However, children from many linguistic backgrounds will be included in the study and, in fact, many English-speaking Puerto Rican, Chicano and Cajun children were included in the final sample.

In order to make a judgment about the effect of Head Start, it is necessary to have a comparison group, a sample of children who are like the Head Start children, but do not have Head Start experiences. Presumably, this comparison group will show growth that would have been characteristic of Head Start children had they not had Head Start experiences. For analytic purposes, the comparison sample must be equivalent to the Head Start sample in background variables and in school experiences. However, since it is not feasible to randomly assign eligible children to Head Start, the Head Start group is likely to be systematically different from other, naturally existing groups. Past studies have indeed found Head Start children to come from poorer, less educated families than their peers. In order to produce nearly equivalent groups, several steps have been taken. Location has been controlled by choosing the comparison groups from the same sites as the Head Start groups. School year experiences were partially equated by selecting the comparison groups from the same classrooms as Head Start groups. These steps controlled for the administrative and physical aspects of the environment. Other factors not under control, such as sex and ethnic group, were recorded for later use in assessing the comparability of the selected groups and in analyses which allow for the adjustment of non-treatment-related differences.

The comparison group consists of some children who were eligible for the Head Start program but who did not attend (or perhaps attended for only a brief period) and other children who were not eligible for the Head Start program. These latter children tend to come from families with a somewhat higher level of income than the others. (Chapter 8 will present a profile of the comparison group.) Note that most Head Start graduates attend classes in which the majority of the class is made up of non-Head Start children. Most such classrooms have fewer than five Head Start children. Thus, it was possible in almost all cases to select a comparison group of non-Head Start children, though the quality of this comparison group differed from classroom to classroom.

3.2 INTRODUCTION TO THE SAMPLING PLAN

A probabilistic sampling process requires, at each stage, a list of all the sampling elements that can be sampled at that stage. This list is called a frame. Frequently each element of the frame is qualified by additional information. This information may be used either for stratification or to determine the probabilities of selection for each element.

The study will be based upon a sample of approximately 900 Head Start graduates in a random sample of elementary schools in 32 sites around the country. This sample size was deemed adequate to perform all of the essential analyses for this study. Because of the relatively small size of the Head Start population in relation to the total elementary school enrollment and because of the uneven distribution of Head Start children throughout the country, it was not possible to sample directly from a list of all elementary schools. The problem was that most of the schools sampled in this manner would not have any Head Start students and many of those that did would not know that they did.

Thus, a more indirect sampling plan has been developed which identifies Head Start graduates through the Head Start centers that they attended. This plan, however, is complicated because of the hierarchical nature of Head Start. Head Start children attend centers which are part of delegate agencies which in turn are associated with grantees. Thus, in order to identify Head Start children, lists of grantees, delegate agencies and centers had to be compiled first. The plan was to use these lists to sample Head Start centers and have these centers identify the schools that Head Start children subsequently attend.

The selection of a sampling plan was based upon the selection of one of two competing strategies. The earliest plan proposed considered selecting a sample of Head Start graduates by first selecting a sample of Head Start delegate agencies and then selecting a sample of children within each agency. The difficulty with this approach was that the sample of children selected from an agency would often be dispersed to a large number of schools and to a large number of classrooms within those schools, so that a great many of the classrooms selected would have but one target child. This plan would have led to a substantial testing burden since the test battery would have had to be administered in a great number of classrooms. Because of the sensitivity of schools to study intrusions, it was felt that this method was impractical. Furthermore, it would have greatly increased the costs of the study by necessitating the inclusion of a great number of schools with, on the average, very few children per school.

It became clear as the sampling plan was implemented that a more efficient approach would be to select Head Start children in such a way that many children could be selected from a small number of school classrooms. This would at once reduce the testing burden for the contractor and even more significantly it would reduce the testing burden on schools, since fewer classrooms would be disturbed. Note that the revised sample still included many classrooms in which only one Head Start child was enrolled, for this kind of classroom is very common. However, far fewer of these classrooms were included than would have been the case with the previous sampling plan.

Ideally, this latter approach would require sampling directly from a complete list of all of the schools in the country that serve Head Start graduates. The sampling would be based on the number of Head Start children in each school. Unfortunately, obtaining a complete list was impractical considering the enormous expense for its compilation. However, it was quite feasible to compile a sample of this list that would serve quite well for sampling purposes. The sampling algorithm is described in detail in the following sections. For reference purposes, a summary of the sampling stages is presented here:

1. A list of all Head Start delegate agencies was compiled.
2. The delegate agencies were grouped so that all of the delegate agencies that fall within a given site (say a city) were grouped together. Thus, for example, all of the delegate agencies in Los Angeles were grouped to form one sampling unit.
3. Sites were stratified by urban, small town and rural and by geographic region (Northeast, South, Southwest, and West).
4. Within each stratum delegate agencies were sampled in proportion to the number of Head Start students enrolled. Approximately 300 "sites" were selected to conduct a survey to obtain revised child counts along with ethnic and linguistic data. Three hundred sites provided a sufficient pool from which to draw the study sites required for the transition study.
5. Based upon this new survey a sample of 43* primary and alternate sites were selected for the transition study.

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*The initial goal was to select 45 sites. Last minute attrition of two urban sites reduced this number to 43.

6. Within each site a list was compiled of all of the schools that Head Start graduates attend.

7. A sample of schools within each site was selected so that an adequate number of Head Start children would be available for testing. The sample size was made large enough at this stage to allow for the expected level of attrition both of entire schools and of students within schools (because of lack of cooperation, for example).

8. Contact was made with SEAs and LEAs to obtain permission to proceed.

9. All of the Head Start children within the sampled schools were rostered. A letter containing information about the study and a parent permission form were sent to Head Start parents.

10. Within the rostered classrooms, a similar letter asking for permission to take part in the study was sent via the non-Head Start children to their parents.

11. Schools which refuse to cooperate and those for which sufficient parent permission letters were not received were eliminated from the sample.

12. Within schools classrooms were eliminated if a sufficient number of parent permission letters were not received.

13. The final selection of schools and classrooms within schools was made based upon the availability of Head Start and non-Head Start graduates in each classroom.

14. A final selection of 32 sites was made from the 43 originally selected.

15. A sample of Head Start graduates was chosen from selected classrooms.

16. The comparison group was sampled from the same classrooms.

3.3 ESTABLISHING THE SAMPLING FRAME

The initial list of all Head Start delegate agencies was composed for this study out of two separate sources. First we received a tape from OCD which contained an 80% sample of delegate agencies. The tape represented the results of a study focused on handicapped children in Head Start. Thus, much of the data on the tape was not relevant to study purposes. However, the tape did contain an essential piece of information: the number of Head Start children enrolled in each agency. This number is a measure of the size of a delegate agency's program and was used to sample agencies. The remainder of the delegate agency information (the remaining 20%) was obtained separately from OCD (along with a 100% list of Head Start grantees). The construction of this list constitutes Step 1 above.

The object was to use this list of delegate agencies to obtain a sample of those schools that Head Start graduates subsequently attend. Thus, a sample of approximately 300 delegate agencies was selected with probabilities proportional to the numbers of children served by the agencies. The delegate agencies passed our questionnaire along to their centers who, for the most part, were able to identify the schools which their graduates attend. In only a few cases were the questionnaires returned with no schools identified.

Not only was a list of schools compiled in this manner, but for each school the number of attending Head Start graduates was indicated. Since it was known that in many communities children from different Head Start centers feed into the same school, to get an accurate estimate of the number of Head Start children in a given school it was necessary to query all of the delegate agencies that might conceivably have sent students to that school.

Our approach to this problem was to aggregate all of the delegate agencies in a given region into a cluster which we will call a "site." In urban areas these sites were cities, whereas in rural areas several contiguous counties made up a site. If any delegate agency was sampled in a given site, then all of the delegate agencies were. In this manner we could list all of the Head Start students who fed into all of the schools in the region and get a relatively accurate estimate of the number of children in each school. This was Step 2 of the sampling procedure outlined above.

This aggregation of delegate agencies into sites conformed very nicely with the goal of the transition study to select about thirty sites with an average of about thirty Head Start children per site. By aggregating all of the delegate agencies within a site, the chances were increased that enough children could be found to make a field effort worthwhile. This was especially true outside of large urban areas where many delegate agencies serve relatively few children.

3.4 STRATIFYING THE SAMPLE

The sample of delegate agencies (already aggregated into sites) was next stratified according to the population of the city, town or county in which the "site" is located, and by the region of the country in which the site falls. This was to guarantee that all regions of the country would be represented in the final sample of Head Start children and that both urban and rural populations would be included.

Furthermore, we wished to guarantee that a sufficient number of black graduates would be included in the sample so that a separate analysis could be conducted for these children. The reason for this last choice is that in the previous Westinghouse study a Head Start impact was detected for black children, but the sample size was so small that it was not possible to properly determine if this impact was significant.

At this early stage of the sampling, ethnic or racial information was not available in the delegate agency file. It was considered sufficient, however, to stratify by urban/rural and by region with the expectation that, because of the large number of Head Start programs serving Blacks, an adequate number of Blacks would fall in the sample. (This is indeed what happened, as will be described below.)

The first stratification of the sites was based upon a measure of the degree of urbanization of the site. Thus, sites were characterized in terms of the population of the central city addresses of the delegate agency. Urban areas were defined to be cities with populations of over 50,000. Small town areas were defined to be cities with populations under 50,000 but over 10,000. The remaining sites were classified as rural.

Note that this is not a perfect division into urban and rural. Some delegate agencies with addresses within large metropolitan regions have Head Start centers in rural counties. (The other case, that is, a delegate agency with a rural address but with urban centers, is extremely rare.) We were confident, however, that sampling based on the divisions above would produce an adequate mix of urban and rural children, although there was a chance that some of the children selected in the urban stratum might actually come from a rural area. No more precise division was possible with the data that were available at this stage because we did not have the addresses of the Head Start centers, but only of the delegate agencies.

From the delegate agency file we determined the number of Head Start children in each of these three divisions:

		Number of Delegate Agencies	Enrollment per Delegate Agency
Urban	148,655	633	235
Small Town	57,445	360	160
Rural	63,458	518	123

Note that in the more rural regions the enrollment per delegate agency is much smaller than in the urban areas. There are thus relatively more rural delegate agencies than there are urban ones.

The other stratifier used was geographic region. It was determined that four regions would be sufficient. Combined with the three divisions created by degree of urbanization, this yields 12 strata in all. (Note that since 30 sites were to be selected this allowed for an average of 2.5 sites per stratum.)

The country was divided up based upon the HEW regions and upon the distribution of Head Start children among these regions. The four strata were: HEW Regions I, II, III and V which can be roughly designated the Northeast; Region IV which is the South; Region VI which is the "Southwest" from Louisiana to New Mexico; Regions VII, VIII, IX and X which can be designated as the West. (See Figure 1 which is a map of these four strata.)

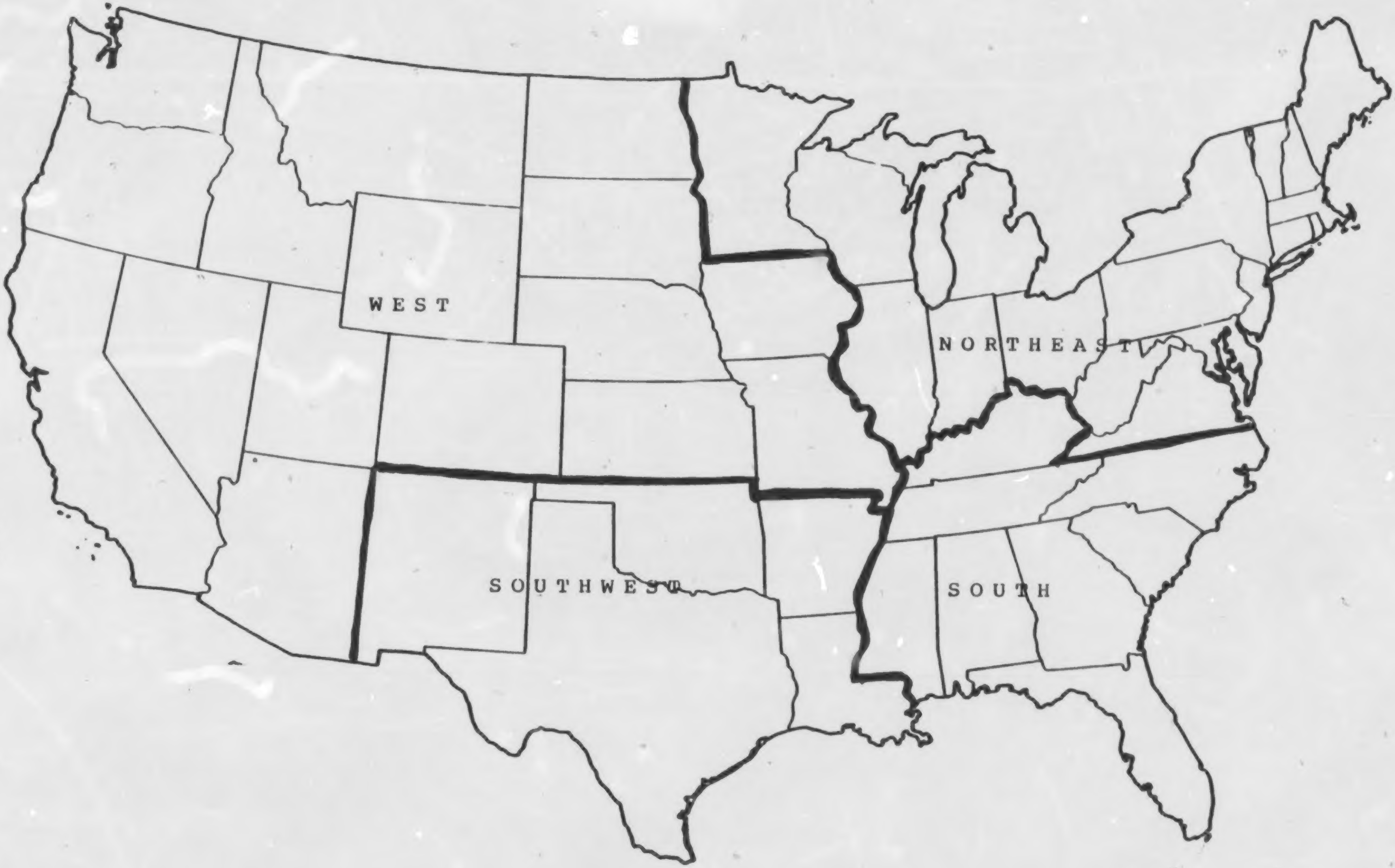

WEST
NORTHEAST
SOUTHWEST
SOUTH

FIGURE 3.1

REGIONAL STRATIFICATION

The number of Head Start children for each of the 12 strata is estimated from the OCD delegate agency file as:

	Northeast	South	Southwest	West	Total
Urban	62,847	36,052	17,697	32,059	148,655
Small Town	17,220	22,691	9,986	7,555	57,445
Rural	13,777	26,663	11,162	11,856	63,458
TOTAL	93,844	85,406	38,845	51,463	269,558

The number of delegate agencies in each of these strata is:

	Northeast	South	Southwest	West
Urban	367	54	59	153
Small Town	133	84	53	90
Rural	165	134	111	108

When the delegate agencies are grouped into "sites" there is much more aggregation in urban areas than there is in rural areas. The number of sites per stratum is as follows (compare these cells with those of the previous table):

	Northeast	South	Southwest	West
Urban	225	48	40	95
Small Town	126	73	51	85
Rural	164	128	103	106

Thus, the average number of children per site for each stratum is:

	Northeast	South	Southwest	West
Urban	279	751	442	337
Small Town	137	310	196	89
Rural	84	208	108	112

Note that this table shows quite a bit of heterogeneity from stratum to stratum in the sizes of the projects within strata. Head Start programs clearly differ from region to region in average program size. These differences emphasize the need for stratification to guarantee that the ultimate sample reflects the heterogeneity of the universe.

The low average number of children per site of some small urban and rural strata also points to another problem. Many of the sites within these strata were thought to be too small to support a Phase II study. That is, in Phase II we intended to test approximately 30 children per site. To do this we estimated that the site itself must be initially determined to have far more than 30 children. The reason is that for various causes many of the children originally listed will never be tested. For example, not all of the children listed will graduate from the Head Start program in any given year, will not go into kindergarten or first grade and thus will not be available for testing. The percentage that will graduate is a number that varies from center to center and was not available to us until our own center survey.

Furthermore, we allowed for the attrition of some of the children due, for example, to failure to get parent permissions, to failure to find the children in the designated schools and to the failure of some schools to cooperate. Finally, many sites, especially in the Southwest, were known to have large numbers of non-English-speaking children for whom testing was not appropriate. To allow for such contingencies we have determined that no site will be selected if it serves fewer than sixty (60) Head Start children. The choice of 60 as the dividing point was a compromise between trying to include as many small sites as possible to increase the representativeness of the study, and not including any small sites that would subsequently have to be dropped during the field effort because of a paucity of children.

This rule could not be applied directly to the selection of delegate agencies from OCD tape (Step 4 above). We felt, and were subsequently confirmed in this belief, that many of the estimates on the OCD tape were incorrect, being either out of date or simply misrecorded. Therefore, decisions to exclude sites were not based on this data set, but were based instead on the results of our own survey. However, knowing that many sites might subsequently have to be discarded due to insufficient size, especially from the rural and small town strata, we were especially careful to obtain adequate samples in these cells.

3.5 SELECTING A SAMPLE OF DELEGATE AGENCIES

A sample of approximately 600 delegate agencies was selected based on a stratified sample with probabilities of selection proportional to the number of children served by the delegate agency. A mailing was sent to these agencies, but it evoked a very poor response rate, about 12%. Even after a follow-up mailing the response was still under 40%. Since this low response rate was considered unacceptable for the first stage of the sampling, and since time was of the essence because of summer closings, a decision was made to use telephone callbacks to increase the response rate.

It was determined that 600 delegate agencies were too many to be pursued by telephone and thus a random sample of approximately 300 delegate agencies was selected for telephone callbacks with the objective of obtaining at least a 90% response rate from this group. The overall sample was allocated to strata so that the delegate agencies sampled in each stratum would represent about the same proportion of children as served by the Head Start programs in that stratum.

The number of delegate agencies sampled per stratum for the sample of 300 is as follows:

	Northeast	South	Southwest	West
Urban	86	7	9	31
Small Town	20	21	11	24
Rural	38	27	20	17

When these delegate agencies are grouped together to form sites, the sample of sites is divided as follows:

	Northeast	South	Southwest	West
Urban	18	6	9	11
Small Town	19	17	11	23
Rural	38	25	17	17

Note that whereas the first table above speaks to the issue of the sampling burden during the telephone interviews with delegate agencies, the second table is most relevant for the subsequent sampling which ultimately selected 32 sites from among the 12 strata.

The selection of delegate agencies was made so that the number of children in the delegate agencies sampled within each cell would be approximately proportional to the number of children in that cell. The following table shows the number of Head Start children in the delegate agencies sampled in each cell and the proportion that number bears to the total number of children in that cell as given on the original OCL tape.

	Northeast		South		Southwest		West	
	Number	%	Number	%	Number	%	Number	%
Urban	19,624	32.2%	11,781	32.7%	6,133	34.7%	11,907	37.1%
Small Town	5,519	32.0%	7,573	33.4%	3,731	37.4%	2,418	32.0%
Rural	4,525	32.8%	8,599	32.3%	3,673	32.9%	3,949	33.3%

The proportion of children sampled in each stratum is approximately the same. Thus, in strata where there are few large delegate agencies, only a few delegate agencies were sampled whereas in strata where there were many small delegate agencies, many delegate agencies were selected. The selection was carried out by permuting all of the delegate agencies in a stratum (grouped into sites) into a random order based on the number of children in the delegate agencies. The permutations were done by computer.

3.6 TELEPHONE FOLLOW-UP PROCEDURES

The sample at this stage consisted of two parts. There was the primary sample of about 300 delegate agencies described in the previous section and then there was an additional sample of 300 left over from the original sample of 600. For the secondary sample of 300 a second mailing was sent out, but no other follow-up was initiated. For the primary sample of 300 a telephone follow-up plan was set into motion. For this primary sample, it was essential to conduct a rapid survey with a very high response rate. Too much delay at this stage could have jeopardized the Phase II effort by delaying the start-up of the field effort late into the fall.

At the time the telephone effort started there were still about 225 (out of the original 300) agencies that had not responded. In order to telephone these people in as brief a time as possible, arrangements were made with the Abt Associates Survey Services Group to provide both telephone interviews and an expert supervisory staff. A training manual/reference handbook was designed which contained background information about the study and a review of practices and procedures to be followed by the interviewers for the delegate agency survey. A formal training session was conducted, including practice calls between interviewers while observed by the National Head Start Transition Study Staff.

An average of three calls to an agency was required to determine the status of the questionnaires sent out in the first mailing. In all, 557 calls were made over a four-day period to request the immediate return of the questionnaire package. Of all the agencies involved, 10% could not be contacted at all during this period. There were various reasons for this; for example, some agencies were defunct, others not readily locatable under the available listing, others closed for vacation. Many of these were, however, located during the follow-up period. About 41% of the agencies said they had received the questionnaires, had no questions about them, and would mail them by a specified date. Another 30% said they had never received the questionnaires or thought they might have received them, but discarded them; they said if we sent them a new set of forms, they would complete and return them. Thirteen percent claimed to have mailed the forms back, though none of these had been received, and only a few were received during the remainder of the survey. These were followed up and many agencies completed and mailed the forms again. Only 6% of the agencies initially refused, and many of these were later persuaded to reconsider their decision. Since the goal of the telephone survey was to achieve a minimum 90% response to the survey for sampling purposes, those agencies that claimed to have made the return or promised to do so by a certain reasonable date were recontacted over the following two months until the return was actually received. In fact, by the time the next stage of the sampling had to take place, a 92% response rate had been achieved. (We did not count as non-response delegate agencies that were excluded because they had been pilot study sites, because they had participated in a previous study, because they were defunct, because they had not directly operated centers or because they operated summer programs only.) In the end we had received responses from 259 agencies. The location of these agencies is plotted in Figure 2.

3.7 INFORMATION FROM DELEGATE AGENCIES

Each delegate agency in the sample was asked to supply the following information by contacting the associated Head Start centers where appropriate:

(a) Current number of children served in each center.

(b) Ethnic and linguistic characteristics of these children.

(c) The number of children going on to kindergarten or first grade in the following year.

(d) The names and location of the schools these children probably attended.

(e) Estimates of the number of children that will attend each school.

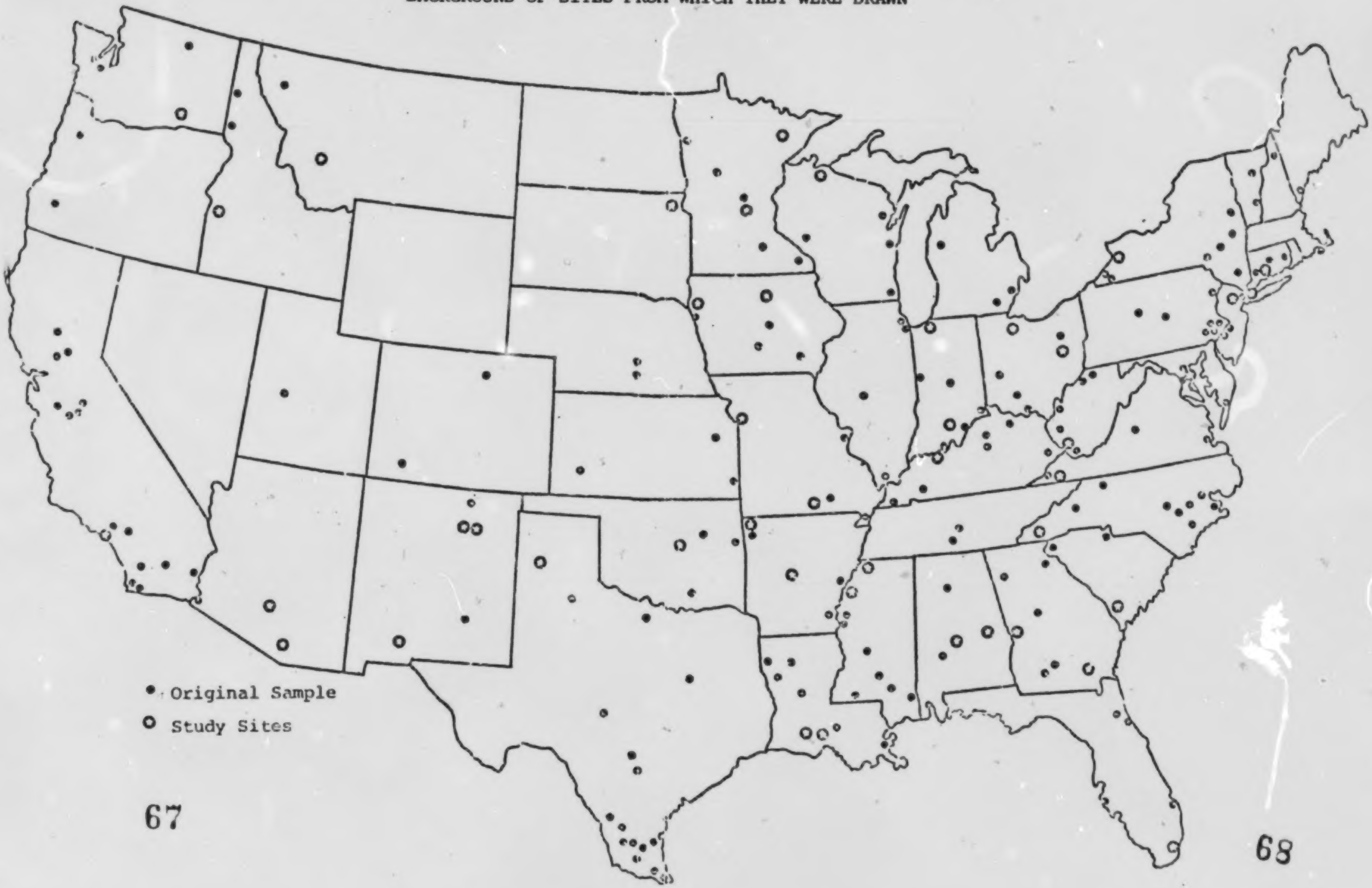
(f) The programs the children attended, e.g., full day/part day, summer programs, two year programs, etc.

In many sites schools receive Head Start students from more than one delegate agency. For all such schools a summation of the information from all relevant delegate agencies was necessary to estimate the number of Head Start students expected to be enrolled in each school, along with their ethnic and linguistic mix.

Schools were likely to be included in our sample only if they usually received students from any delegate agency within the same city. For example, if a child from a center in city A moved to city B, the school the child attended there was not a part of the identified school universe for sampling (unless it was also selected through a delegate agency in city B). This resulted from our decision to identify schools through the delegate agencies. The staff in these agencies did not know what school a child attended, if he left the area. This will of course bias sampling estimates due to the loss of children who move away. However, such a decision was necessary if the sampling effort was to remain under control. Tracking students to other cities would have required a disproportionate expenditure of funds.

FIGURE 3.2

THE NATIONAL HEAD START TRANSITION STUDY SITES AGAINST A BACKGROUND OF SITES FROM WHICH THEY WERE DRAWN



● Original Sample
○ Study Sites

3.8 SAMPLE DESCRIPTION

The survey results from the sample of 300 delegate agencies were aggregated so that all of the Head Start children within a given site could be considered as a group. At this point each site was assessed to determine if it could remain in the study or if it had to be excluded because it contained too few target children.

For each delegate agency in the remaining sites the number of Head Start students who were to enter school in the fall, 1976, was computed. For many agencies the number of graduates was almost the same as the number of enrollees estimated from the OCD tape whereas for others there were large differences. In the main, this resulted in serious revisions downward in our previous estimates of the number of Head Start children per site. Based on these new estimates many sites now fell below the 60 that were required for eligibility for the Phase II sample. A large number of rural and small town sites were excluded because they contained too few Head Start graduates. A few urban sites were also excluded. Note, however, that the fraction of Head Start graduates excluded in this fashion is only a small percent of the overall Head Start population.

The number of English-speaking graduates was estimated for each site. For the most part this did not markedly affect our estimates of the number of eligible children per site since most sites are predominantly English-speaking. However, some urban areas such as Los Angeles (Chicanos), Tucson (Chicanos), Lafayette, La. (Cajuns) and New York City (Puerto Ricans) have substantial non-English-speaking Head Start populations. The most important reductions in the number of eligibles, though, occurred in some rural sites in which the numbers of non-English-speaking children were so large that otherwise acceptable sites had to be excluded because 60 English-speaking children could not be found.

Excluding these small sites may introduce some bias into our analyses if for any reason the excluded sites are different from the other sites within the same strata. However, it is unlikely that this is so, for many of the small sites which still remain in the study sample seem to be much like those that were excluded. For example, some of the remaining small sites are really aggregates of even smaller sites separated by distances of 50 to 200 miles. These aggregates have been retained because they contain more than 60 children in all and because the subsites are still marginally close enough together to be managed by our field staff.

Regardless of the potential bias, however, it was clearly impractical to sample very small sites. In fact, subsequent experience has shown us that it is not unusual for more than 50% of the children whom we expected to populate a site to be unlocatable by the field staff. For this reason we have tested fewer than 30 children in some sites even though we started with the expectation that there were more than 60 children available.

A sample of 43* sites within 12 strata was thus selected for further sampling of schools and children within schools. This sample excluded those sites which responded to our survey but were unable to provide any of the names of the schools that Head Start children attend.**

The random sample of sites selected in each stratum is given in Table 3.1. Within each stratum sites are listed in the order in which they were randomly selected.

3.8.1 Sample Stratification

At this juncture in the sampling process the original sample design called for additional refinement of the sample stratification based upon the ethnic mix and linguistic background of Head Start students. One of the primary purposes was to guarantee an adequate sample of black Head Start graduates. However, a careful examination of the survey results to this point lead us to believe that there was no need for any stratification beyond the 12 strata based upon geographic region and degree of urbanization outlined above. All of the groups for which representation was required would almost surely be selected in adequate numbers without any further refinement of the sampling process. This position can be justified by showing that the 43-site sample was well distributed across several ethnic and linguistic groups as well as by geographic region and degree of urbanization. Table 3.1 lists all of the 43 sites in their respective strata and indicates the final sample of 32 sites.

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*Originally, 45 sites were selected; however, two sites, Waterbury, CT and Nampa, ID dropped out of this sample early in the field effort.

**There was not enough time to obtain the names of these schools from other sources if the Phase II study was to be fielded in time. Thus, these sites were considered to be non-respondents. Sites such as Austin, Texas, Indianapolis, Indiana and Mason City, Iowa, were excluded for this reason.

TABLE 3.1

SITES SELECTED BY REGION AND CITY SIZE

NORTHEAST	Urban	East Orange, NJ
		Manhattan, NY
		Buffalo and Lackawanna, NY
		*Washington, DC
		New Britain, CT
	Small Town	Virginia, MN
		Fremont, OH
		St. Cloud, MN
		*Michigan City, IN
	Rural	Christianburg, VA
		Uhrichsville, OH
		Superior, WI
		Welch, WV
		*Mitchell, IN
SOUTH	Urban	Owensboro, KY
		*Columbus, GA
		Miami, FL
	Small Town	Greenville, MS
		Auburn, AL
		Waycross, GA
		Selma, AL
	Rural	Denmark, SC
		Sardis, MS
		*Franklin, NC
SOUTHWEST	Urban	Lafayette, LA
		Amarillo, TX
		*Little Rock, AR
	Small Town	*Las Cruces, NM
		Natchitoches, LA
		*Rogers, AR
	Rural	Las Vegas, NM
		Taos, NM
		*Chandler, OK
WEST	Urban	*Tucson, AZ
		Kansas City, MO
		Los Angeles, CA
		Sioux City, IA
	Small Town	Helena, MT
		Richland, WA
	Rural	Remsen, IA
		Siseton, SD
		West Plains, MO
		*Coolidge, AZ

*Indicates that the site was not included in the final sample of 32.

In our original design paper, 13 strata were referenced that merited serious consideration. These are:

Stratum I	Programs serving predominantly black children in the central cities. (Central city is defined using U.S. Census Bureau data. A central city is any county which contains a city of over 50,000 inhabitants.)
Stratum II	Programs serving predominantly black children in rural regions.
Stratum III	Programs serving predominantly black children in metropolitan regions not including central cities.
Stratum IV	Programs serving predominantly Chicano children in the central cities in the Southwest; i.e., Texas, New Mexico, Arizona, Nevada, Colorado, Utah and California.
Stratum V	Programs serving predominantly Chicano children in rural regions in the Southwest.
Stratum VI	Programs serving predominantly Chicano children in all other regions.
Stratum VII	Programs serving predominantly Puerto Rican children.
Stratum VIII	Programs in isolated Appalachia and the Ozarks.
Stratum IX	Programs serving predominantly white children in the central city.
Stratum X	Programs serving predominantely white children in rural regions other than Stratum VIII.
Stratum XI	Programs serving predominantly white children in metropolitan areas that are not central cities.
Stratum XII	Programs serving groups of mixed racial and ethnic backgrounds in the central city.
Stratum XIII	Programs serving groups of mixed racial and ethnic backgrounds not in the central city.

Consider how the 43 primary and alternate sites and the 32 final sites listed in Table 3.1 can be classified according to these strata. A few sites such as New York and Los Angeles will be classified below into more than one group because of the size of the sites and the heterogeneous nature of the programs within these sites. Most sites, however, will be classified into but one stratum even though there may be individual delegate agencies within those sites that could be classified into another stratum. This is done to increase the clarity of this presentation.

TABLE 3.2

SITES SELECTED BY STRATUM

Stratum I	East Orange, NJ
	New York City, NY
	Buffalo, NY
	*Washington, DC
	*Columbus, GA
	Lafayette, LA
	Miami, FL
	*Little Rock, AR
	Los Angeles, CA
	Kansas City, MO
Stratum II	Denmark, SC
	Sardis, MO
Stratum III	Greenville, MS
	Auburn, AL
	Waycross, GA
	*Michigan City, IN
	Selma, AL
	Natchitoches, LA
Stratum IV	*Tucson, AZ
	Amarillo, TX
	Los Angeles, CA
Stratum V	*Coolidge, AZ
	Taos, NM
	Las Vegas, NM
Stratum VI	*Las Cruces, NM
Stratum VII	New York City, NY
Stratum VIII	Welch, WV
Stratum IX	New York City, NY
	Sioux City, IA
Stratum X	Remsen, IA
	Sisseton, SD
	West Plains, MO
	*Franklin, NC
	*Mitchell, IN
	Uhrichsville, OH

*Indicates that the site was not included in the final sample of 32.

Stratum XI	Virginia, MN
	Fremont, OH
	St. Cloud, MN
	* Rogers, AR
	Helena, MT
	Richland, WA
	Nampa, ID
Stratum XII	Kansas City, MO
	Amarillo, TX
	Owensboro, KY
	New Britain, CT
Stratum XIII	Christianburg, VA
	Superior, WI
	Welch, WV
	Waycross, GA
	* Chandler, OK
	* Coolidge, AZ

Not only have the groups in the original stratification been well represented but, in addition, several sites with substantial populations of Native Americans have also been included. These sites are:

Superior, WI
* Chandler, OK
Helena, MT
Sisseton, SD

It should be pointed out that within each selected site children will be sampled without any stratification. Thus, it was possible that all of the groups represented locally would not be represented in the final sample. In particular, Los Angeles contains both Blacks and Chicanos, but the final sample is composed entirely of Blacks.

3.8.2 Urban Representation

The sample of 43 primary and alternate sites is an intermediate step (Step 5 in Section 3.3.1) in the sampling process. Only 32 of these 43 sites were selected for Phase II. There was one major sampling problem that is worthy of special note. During the course of the study it was much more difficult to obtain the cooperation of urban areas than it was for small urban and rural areas. Some areas refused outright, whereas others debated the question of participation and ultimately refused to cooperate so close to the time that sampling had to begin that it was impossible to replace them. Over the entire sampling period the following urban sites denied us permission to conduct the transition study within their boundaries:

Washington, DC
Waterbury, CT
Columbus, GA
Little Rock, AR
Tucson, AZ

Two other urban sites were unable to provide us with essential survey information and thus also had to be dropped from the sample. They are:

Austin, TX
Indianapolis, IN

In total, seven out of 18 urban areas contacted could not be used. On the other hand, we were forced to drop only two (Liberty, MS and Mason City, IA) out of all of the small urban and rural sites considered, for reasons of lack of cooperation or necessary information.

Furthermore, once a site was sampled the response rate for Head Start children was substantially lower in urban than in other areas.

	Response Rates
Urban	49%
Small Town	68%
Rural	63%

As a consequence of these factors there was an overall underrepresentation of the urban population in the final child sample. The extent of this underrepresentation will be illustrated below.

3.8.3 School Sample

The sample of 32 sites includes an associated sample of schools. That is all of the schools within these sites that receive children who graduated from Head Start centers. The list of all of these schools was compiled by surveying every Head Start center within each site to find out where the children go to school upon graduation. The centers also recorded how many children go to each school. In many cases only one Head Start center fed a given school whereas some schools had Head Start children from several centers.

Using the information from our survey we computed for each school in a site the estimated number of Head Start graduates. Next, schools were sampled within each site with probabilities proportional to the number of Head Start children estimated to be in attendance. This procedure tended to select many schools with relatively large attendance and a few with small attendance. This is Step 7 in Section 3.2.1.

In all cases, more schools were selected than it was estimated that we would need. That is, schools were randomly selected until a total of at least 50 Head Start children was reached and, in general, at least four schools sampled. In some sites this required only three schools because there were estimated to be a large number of children in each school. In other sites more than ten schools were needed to make up this number because many schools had only one or two Head Start graduates (see Table 3.3).

In some sites, the number of children in the sampled schools was chosen to be greater than 100. This occurred in sites in which there were considerable numbers of non-English-speaking children. In these sites, it was presumed that by oversampling we would compensate for the expected higher attrition rate. It was not clear how accurate the center's assessments of English fluency were and it seemed reasonable to be conservative and sample more than enough children.

Our aim, where possible, was to select three to five schools per site and about two classrooms per school. This was to enable us to estimate school to school variance and classroom to classroom variance within schools. In addition by not sampling too much in any one school the school burden could be relatively evenly distributed among schools.

The total number of Head Start children across all sites for whom positive parental responses were obtained was 932. This sample was drawn out of a total of 1580 children for an overall response rate of 59%. It was pointed out above, however, that the major contributor to this low response rate was from the urban stratum.

Response Rates by Strata

	Northeast	South	Southwest	West	Total
Urban	60%	52%	38%	48%	49%
Small Town	72%	62%	68%	71%	68%
Rural	62%	59%	62%	67%	63%
Total	65%	59%	49%	60%	59%

Table 3.3

SITES, SCHOOLS AND HEAD START CHILDREN IN STUDY SAMPLE

Site	Number of Schools in This Site With Head Start Graduates	Number of Head Start Children in These Schools	Number of Schools in Sample	Number of Head Start Children in These Schools	Study Sample of Participating Head Start Children
East Orange	8	84	5	31	21
Manhattan	150	2719	3	68	40
Buffalo	28	292	4	34	18
New Britain	13	87	5	46	28
Virginia	21	168	5	42	34
Fremont	21	138	5	47	35
St. Cloud	16	80	9	40	30
Christianburg	22	156	5	38	25
Ulrichsville	9	159	4	40	26
Superior	28	155	4	45	30
Welch	16	204	4	57	31
Owensboro	5	123	3	59	42
Miami	53	1390	3	35	7
Greenville	14	402	2	64	40
Auburn	10	2003	3	51	30
Waycross	7	144	3	64	33
Selma	12	125	3	43	35
Denmark	8	71	5	43	28
Sardis	22	594	2	39	20
Lafayette	11	463	3	129	34
Amarillo	15	506	4	68	41
Natchtoches	9	78	5	44	30
Las Vegas	14	317	3	48	29
Taos	21	410	2	54	34
Kansas City	55	521	4	64	26
Los Angeles	235	3973	3	47	16
Sioux City	22	86	8	34	28
Helena	11	99	5	36	25
Richland	19	105	10	39	28
Remsen	19	69	10	37	28
Sisseton	12	103	3	40	25
West Plains	18	303	4	54	35

For this final sample, it was our intent that the sample of children per stratum be roughly proportional to the population within that stratum. We did, however, try to make some slight adjustments to increase the evenness of the geographical distribution of the sample. Let us illustrate this point.

The population in Head Start centers was divided among the four regions of the country as follows:

Northeast	South	Southwest	West
93,844	85,406	38,845	51,463

If the total sample of 900 Head Start children was to be divided up among these strata in proportion to the size of the stratum then the sample distribution would be:

Northeast	South	Southwest	West
34.8%	31.7%	14.4%	19.1%

However, there is a disproportionate concentration of Head Start in the South relative to the rest of the nation. We proposed in our design paper to reduce the sample in the South so as to increase the sample in areas that are less represented. Therefore, we selected a sample of 32 sites so as to increase the sample drawn in the two smallest regions, the Southwest and the West, while reducing the Southern sample. In particular, we planned to select 32 sites as follows:

	Northeast	South	Southwest	West
Number of Sites	11	8	5	8
Number of Children	309	225	141	225
Proportion of Sample Expected in Stratum	34.3%	25.0%	15.7%	25.0%

The Head Start sample is broken out in Table 3.4 by the 12 strata used for the sampling design. Compare especially the figures under "Total" with the adjacent figures marked "Expected." These figures note the discrepancies between what the sample was designed to achieve and what it actually achieved. On a region by region basis the sample came very close to achieving its goals. In the Northeast, for example, the sample obtained 318 Head Start children whereas 320 would have been expected.

On the other hand, the sample did not do well in representing the urban areas. Whereas 513 children were expected to be in these cells, because of the urban problems related above, only 301 were finally selected.

This has a very interesting consequence for the analyses. In the final sample there are about as many children in each of the area categories -- urban, small town and rural. This distribution will therefore tend to weight results in a balanced fashion between these categories. The distribution for region -- Northeast, South, Southwest and West -- on the other hand, reflects the differences in region size.

Table 3.4

SAMPLE ACHIEVED VS. EXPECTED BY STRATA

	Northeast	South	Southwest	West	Total	Expected
Urban	107	49	75	70	301	513
Small Town	99	138	30	53	320	199
Rural	112	48	63	88	311	219
Total	318	235	168	211	932	
Expected	320	233	146	233		

3.8.4 Analytic Sample

Within each of the sampled sites there are study children for whom we do not have a full complement of data. This, therefore, reduced the size of the child sample for analytic purposes. The exact reduction depends, of course, on the particular measures being analyzed. The largest analytic samples are as follows:

Table 3.5

HEAD START SAMPLE

	Northeast	South	Southwest	West	Total	Expected
Urban	71	47	61	50	229	417
Small Town	92	115	23	24	254	162
Rural	101	42	46	85	274	178
Total	264	204	130	159	757	
Expected	260	189	119	189		

This table shows a reduction of 175 children from the overall sample presented in Table 3.4 to the analytic sample. The "Expected" row and column indicate how the sample was intended to look, given the total sample size of 757. Note that the analytic sample shows approximately the same properties as the overall sample.

Table 3.6

NON-HEAD START SAMPLE

	Northeast	South	Southwest	West	Total
Urban	86	42	77	88	293
Small Town	107	143	41	72	363
Rural	111	66	53	85	315
Total	304	251	171	245	971

These non-Head Start children, sampled from the same classrooms as the Head Start children, form the overall comparison group. Some of these children have had out-of-the-home preschool experiences and some not. For analytic purposes, only those children who did not have preschool experience are used for comparison purposes (see Chapter 8).

3.9 CONCLUSIONS

This chapter has documented the sampling strategy as conceived on the one hand and operationalized on the other. The conclusion which must be drawn is that the Head Start and non-Head Start children obtained in this study cannot be considered as a representative sample of their respective populations. That is, the sample should not be used to make inferences about the distribution of the overall Head Start population. The lower than acceptable response rate of Head Start parents for participation in the study, at a minimum, leads us to question the representativeness of the sample. The comparison group sample is not really a "sample" in that they evidenced an even higher degree of self-selection into the study sample than the Head Start group. To a great extent, the time constraints and the privacy regulations had a negative impact upon the sampling procedures.

However, the obtained groups do provide a good representation on a national basis. We have confidence that the selected Delegate Agencies, the Head Start Centers, and to a lesser extent the public schools and teachers do constitute a representative sample. The children and parents give a good "broad brush" picture for all the strata. They are well distributed across regions and city size. Response rates for rural and small town areas are much better than those for urban areas. This difference may reflect the greater reluctance of urban areas to participate in research activities because they have been tested to such a great extent. Therefore, the groups obtained for testing provide a well distributed source of data from which to make significant, if limited, analyses of the Head Start experience.

CHAPTER FOUR

FIELD OPERATIONS

4.0 INTRODUCTION

This chapter describes the field operations procedures of the National Survey of Head Start Graduates. The chapter is organized in five sections. The first reviews plans for the National Head Start Transition Study and factors which affected the implementation of study plans. The second section describes the pilot study conducted during the spring of 1976. The third section provides an overview of the site development process by which cooperation was obtained from Head Start Grantee and Delegate Agencies, local school districts and schools, as well as from parents. This section is followed by a description of data collection procedures. The chapter concludes with a review of the quality of data that were obtained for the study.

4.1 NATIONAL HEAD START TRANSITION STUDY PLANS

Plans for the study were complex given the overall study design and the large number of sites participating in the study. Study plans are reviewed briefly below.

Several specific tasks needed to be undertaken prior to the collection of parent and child data for the National Head Start Transition Study:

- Following the selection and development of instruments for use in the study, a survey was conducted of a stratified sample of Head Start Delegate Agencies. The survey was designed to obtain information about the characteristics of agencies, of the centers under their auspices and to identify schools Head Start graduates would enter in the fall. Survey results would form the basis for the selection of Head Start communities for study. The survey is described in more detail in Chapter III as well as in subsequent sections of this report.

- A pilot study was conducted in four sites during the early summer to determine the age-appropriateness of the study instruments as well as the effectiveness of field procedures for obtaining the necessary cooperation from sites (site development) and data collection.

- Upon completion of the Head Start Delegate Agency survey and the pilot study, 43 Head Start communities were selected as potential study sites as well as, in each of the communities, a group of schools with Head Start graduates.

- Site visits were then conducted to all of the Head Start communities selected for the study. The main purposes of these visits were: (a) to obtain cooperation from local school districts and schools selected for the study; and (b) to identify classrooms with Head Start graduates through rostering procedures.

- The rostering information formed the basis for the selection of a subsample of schools and classrooms in each of the sites. In these classrooms, parent letters were distributed to all students to familiarize the family with the objectives of the study and request permission for the family's participation in study activities. Some background information also was sought from each of the families to permit the selection of a group of children who were eligible for participation in Head Start but did not receive any program services.

- From the 43 Head Start communities, 32 were then selected for participation in further study activities -- the testing of Head Start and non-Head Start children, interviews with their parents, and information from teachers concerning individual participating students as well as their background.

- The selection of study sites was followed by the sampling of approximately 30 Head Start and 30 non-Head Start children in each site based on parent permission letters and family background questionnaires. The selection of study participants marked the start of data collection in each of the sites by an on-site community interviewer who had received special training in the administration of the study instruments.

Original plans for the study called for data collection to start at the beginning of the 1976-77 school year and to be concluded by Thanksgiving, in order to make study findings available to the Office of Child Development for Congressional Hearings planned for the early spring of 1977. Although an attempt was made to adhere to this plan as much as possible, it was necessary to modify the time schedule substantially for a variety of reasons. First, considerable delays were encountered in getting approval for the study's instrument package from the Office of Management and Budget (OMB) which postponed the selection of sites and the start of data collection for at least three months. Second, the severity of the winter seriously affected the data collection schedule because of school closings and impassable roads to the homes of participating families in the study.

4.2 PILOT STUDY

Five Head Start communities were chosen for participation in the pilot study. The sites were selected using a grantee agency list of Head Start programs and census data for each of the Head Start communities. Head Start Delegate Agency Survey data were not available for pilot site selection purposes since the survey was postponed until mid-May when the study's instrument package was approved by OMB. Only two of the original five sites participated in the pilot study primarily because of early school closings in three of the communities. Three alternate sites, all located in New England, were selected for participation in the pilot study where schools closed some three weeks later than in other areas of the country. Two of these alternate sites were involved in the pilot study; in the third site, staff turnover of the Head Start Delegate Agency made center participation in the study not feasible. The pilot communities were located in: Hartford, Connecticut; York County, Maine; Providence, Rhode Island; and Berkeley and Dorchester Counties, South Carolina. Given the timing of the pilot study (late May), it was not feasible to collect data on individual students in the school, since most schools had started their summer recess when data collection got underway. Teacher data on individual students as well as on their own background were obtained for some schools during the course of summer vacation.

As was noted earlier in this chapter, the pilot study had two distinct purposes: (1) to determine the age-appropriateness of the study instrument; and (2) to field test site development and data collection procedures developed for the study. Pilot study findings resulted in the selection of the final test battery outlined in Section 2.3 of this report. The psychometric characteristics of these measures are detailed in the Appendix. Similarly, field procedures were refined on the basis of the pilot study in areas of site development and subsampling classrooms in schools selected for participation in the study. Modifications in field procedures that were made based on the pilot study are briefly summarized below:

- The length of on-site visits was increased to allow adequate time to conduct meetings with local school districts and school officials in order to gain their support for the study;
- Rosters were obtained from Head Start centers containing the names and addresses of all Head Start graduates. Centers were paid to provide this information. The rosters were used in the identification of classrooms with Head Start graduates and in following up with parents who did not respond to the request for parent permission;
- Classroom rostering was made part of on-site field procedures, using Head Start graduate lists, to permit the selection of a subsample of classrooms within each school; and,
- Follow-up to parent permission letters to increase the overall response rate which was extremely poor during the pilot phase.

4.3 SITE DEVELOPMENT

Site development was undertaken with three distinct groups of participants in the study: Head Start programs, local schools, and children enrolled in those schools, as well as their parents. An overview of site development is presented in Figure 4.1 which shows various aspects of this complex process, as well as the interrelationship between tasks and the time sequencing. Each task is described in detail below.

4.3.1 Preliminary Site Development

The design of the National Head Start Transition Study called for the involvement of local schools in sites selected for participation in the study. Local school participation was crucial to the success of the study -- to enable the selection of a comparison group of children from classrooms with Head Start graduates, and to obtain data from teachers on the social competence of both groups of children.

Obtaining support from local schools for studies sponsored by the federal government is an extremely complex process given their concerns about

Site Development Process

National Head Start Transition Study

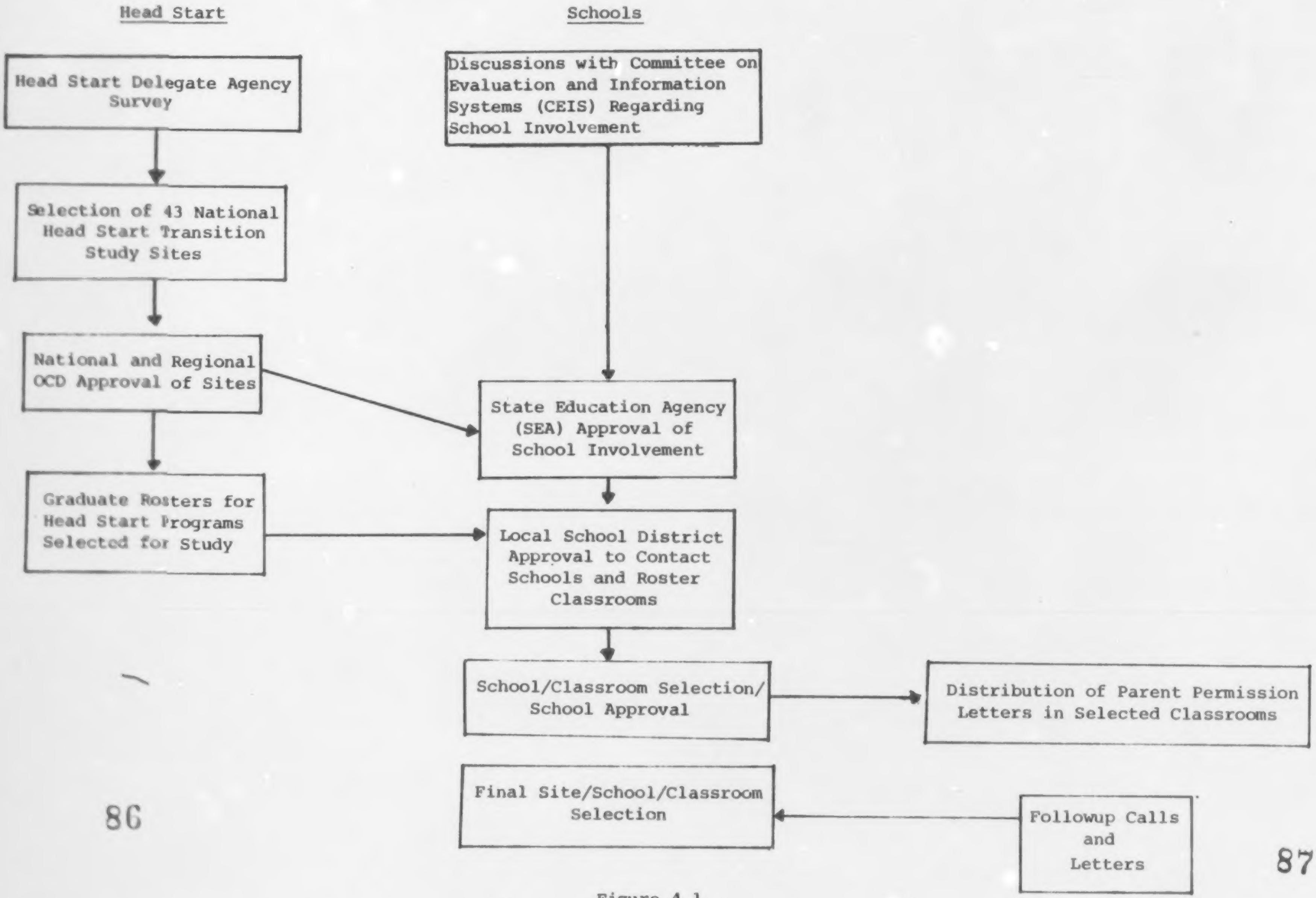
Head Start
Schools
Head Start Delegate Agency Survey
Selection of 43 National Head Start Transition Study Sites
National and Regional OCD Approval of Sites
Graduate Rosters for Head Start Programs Selected for Study
Discussions with Committee on Evaluation and Information Systems (CEIS) Regarding School Involvement
State Education Agency (SEA) Approval of School Involvement
Local School District Approval to Contact Schools and Roster Classrooms
School/Classroom Selection/ School Approval
Distribution of Parent Permission Letters in Selected Classrooms
Final Site/School/Classroom Selection
Followup Calls and Letters

Figure 4.1

interruptions in classroom schedules and teacher and pupil respondent burden. Schools in fact have become increasingly resistant to participating in studies over the past few years. In 1972, a mechanism was set up by State Education Agencies, the Committee on Evaluation and Information Systems (CEIS), to stem the flow of data requests at all levels of the educational system and to address other issues related to studies involving schools. Minimizing respondent burden, interruptions in classroom activities, and duplication of data collection are among the committee's many goals and concerns. While CEIS is technically not in a position to prevent data collection from taking place in local schools, a failure to consult the group and to follow proper CEIS procedures can seriously hamper efforts to obtain support and cooperation from local schools.

Early in March, 1976, contact was made with CEIS to familiarize the group with study objectives and plans and to request a formal review of the study by a subcommittee of CEIS. Initially, several concerns relating to overall respondent burden were expressed by CEIS. In response to these concerns pilot study plans were modified in the following ways:

- the maximum number of schools per site would be limited to no more than five;
- the total number of classrooms participating in data collection would not exceed ten per site (or an average of two per school); and
- elimination of a school survey which had originally been planned.

Study plans were approved by CEIS on the basis of these modifications and this decision was communicated to all State Education Agencies by the reviewer assigned to the study by CEIS. Although CEIS was not willing to lend its full support to the study, the group indicated that they would not hamper our efforts to seek the cooperation of school districts and local schools.

4.3.2 Head Start Survey

One of the first tasks of the study was a survey of Head Start programs to obtain information about the characteristics of agencies and centers under their auspices and to identify schools that Head Start graduates planned to enter. As was noted earlier, this survey was scheduled to take place during the spring so that the results could be used in the selection of sites for the pilot and the main study. The survey was postponed, however, until mid-May when clearance was obtained for study instruments from OMB.

A stratified sample of approximately 600 Head Start Delegate Agencies was selected for participation in the survey. A mailing was sent to these agencies, as well as a follow-up request for information. Copies of these mailings were sent to Grantee Agencies and Directors of Regional Offices of Child Development. As was noted in Chapter III, the response to these mailings was poor primarily because a number of centers were closed during the summer months or had insufficient staff to respond to the mail questionnaire. A telephone survey was then conducted with a random sample of approximately 300 Head Start Delegate Agencies in an effort to obtain at least a 90% response rate by mid-August. A final response rate of 92% was obtained.

4.3.3 Site Selection Approval

Once the Head Start Delegate Agency survey had been completed and the 43 Head Start communities were selected for participation in the study, several site development tasks were undertaken before Head Start programs and local schools with Head Start graduates could be approached regarding their participation in the study.[1] First, contact was made with Regional Directors of OCD to familiarize them with the study and to obtain their approval for the sites that were selected. One of the Regional offices expressed concern about the site selection procedures. The regional concerns were based on unequal distribution of sites by HEW region and the exclusion of Spanish-speaking children with limited knowledge of the English language. Once selection criteria were clarified to Regional OCD staff, approval was obtained to contact Head Start agencies in each of the sites.

Local Head Start Program Site Development. Contact with Head Start Grantee and Delegate Agencies selected for participation in the study was made through a mailing. In most of the sites, the Head Start program was operated by one umbrella agency (either Grantee or Delegate). In urban communities, however, such as Los Angeles, New York City, Buffalo and Washington, D. C., a number of agencies shared responsibility for Head Start.

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[1] A list of the sites is included in Attachment A.

As part of the mailing, agencies were provided with information about the overall objectives of the study, and plans for the study, as well as the extent to which agency and center personnel would be involved in the study. A request was made to the sponsoring agencies to provide the following information for the study: ● financial expenditure data for the Head Start program; ● copies of the most current Head Start Performance Standards Self-Assessment Validation Instrument (SAVI); ● and the completion of Head Start Graduate Rosters by centers under study. Centers were reimbursed for expenses incurred in the preparation of these rosters.

The graduate rosters were crucial to the study's success for two reasons: (1) to permit the identification of classrooms with Head Start graduates and the selection of a subsample of no more than ten classrooms per site; and (2) to facilitate follow-up calls and mailings to parents of Head Start graduates chosen for participation in the study.

In some of the sites, the roster information was obtained directly from Head Start agencies and centers during on-site visits since there was insufficient time to complete and return the forms prior to the site development visits which were initiated in mid-September.

State Approval of School Selection. Immediately after sites were approved by the OCD Regional Directors, a letter was sent to Commissioners of Education Agencies in 30 states with study sites by the OCD Project Officer. The letter informed State Education Agencies (SEAs) about the study and requested their permission to make contact with Local School Districts (LEAs) and local schools. Copies of these letters were sent to CEIS Coordinators in each of the 30 states, all of whom had already been notified about the study by the CEIS reviewer.

Letters were followed up with telephone calls to each of the SEA Commissioners. In many instances, the review and approval of study plans had been assigned to someone other than the Commissioner (the CEIS Coordinator or someone else on the Commissioner's staff). Some objections were raised by some SEAs about the large number of schools that were initially selected for the study. The assurance that no more than five schools per site would participate in data collection following classroom rostering alleviated these concerns.

One of the original 43 sites (Waterbury, Connecticut) was dropped from the study at the request of the SEA. According to the SEA, the Local School District (LEA) and local schools under its jurisdiction were encountering severe problems with parents who were protesting recent teacher cutbacks and resulting increases in class size. A city similar in size and Head Start program characteristics in the same state (New Britain) was selected to replace the Waterbury site.

Information was obtained from SEAs about each of the Local School Districts (LEAs), such as the name, address and telephone number of superintendents. Some SEAs requested that special procedures be followed in terms of site development and expressed a desire to be present for the on-site visit to local communities for monitoring purposes.

Local School District Approval. Site development with local school districts (LEAs) was a two-stage process. First, permission was requested to roster classrooms in schools initially selected for the study to enable the identification of classrooms with Head Start graduates and the selection of a subsample of no more than five schools per site for data collection. Once the subselection of classrooms had been completed, permission would be obtained from LEAs and schools to distribute parent permission letters and to involve teachers and selected pupils in data collection.

Contact was made by letter to superintendents of a total of 127 LEAs immediately after SEA approval had been obtained. The letter provided information about study objectives, the two-stage site development plan, and it outlined the expected respondent burden on school personnel. A memorandum regarding the study was enclosed with the letter for distribution to principals of a sample of schools.

This letter to the LEAs was followed up by a telephone call to answer questions about the study and to set up a schedule for the on-site visits. Site visits in a number of sites could not be scheduled in September because of teacher strikes (Buffalo and Alabama) or delays in getting SEA approval for the selection of sites (Connecticut).

In other sites, delays were encountered in obtaining clearance for the study from Research and Evaluation Committees of the LEAs (New York City, Kansas City, Los Angeles). A back-up site was selected for Los Angeles at this time to insure the participation of a large urban site in the southwest. Tucson, Arizona was chosen to serve as a back-up site. Ultimately approval was obtained for these primary sites.

4.3.4 Site Development Visits

The purpose of the site development visits to each of the Head Start communities selected for participation in the study was five-fold:

(1) to meet with superintendents of LEAs and to get permission for the rostering of classrooms in selected schools;

(2) to visit schools and roster kindergarten and/or first grade classrooms (depending on the entering grade level of Head Start graduates);

(3) to get permission from LEAs and a subsample of local schools to distribute parent permission letters in selected classrooms and to involve teachers and students in data collection for the study;

(4) to prepare and distribute parent permission letters to selected classrooms; and,

(5) to recruit a staff of two interviewers in each site to undertake responsibility for follow-up to the parent permission letters and for parent and child data collection.

As was noted previously, visits in some sites also needed to be scheduled with Head Start Grantee or Delegate Agencies and centers to obtain the Head Start graduate rosters.

Staff Training and Site Visit Preparation. Site visits were the responsibility of a group of senior staff selected for this task on the basis of their knowledge about elementary education, child development programs, site development, and public relations. Each senior team leader was accompanied on the site visit by one or two junior staff to assist in a variety of on-site tasks, such as the scheduling of appointments, and classroom rostering, as well as the preparation and distribution of parent permission letters. The size of the on-site visit team varied depending on the total number of schools per site (which ranged from 3 to 12), as well as the geographic spread of the site. Some of the Head Start communities selected as sites provided services to multiple counties; others had centers located at distances 100 to 200 miles apart. Each of the on-site teams was responsible for the site development of a cluster of study sites in an attempt to reduce overall site development costs.

On-site teams participated in a three-day training session prior to making follow-up calls to LEAs. In addition to providing an overview of the study, findings from previous Head Start studies and the objectives of the Head Start program, staff were sensitized to the concerns of the education community, such as excessive respondent burden and strict adherence to privacy legislation. Extensive training was provided on each aspect of the site visit--the follow-up call to LEAs, the initial visit, school rostering, LEA and local school approval of study plans, parent permissions, and recruitment of staff.

Local School District (LEA) Visits. The scheduling of these site visits was extremely complex given the large number of LEAs and schools that were involved in most of the sites. It was extremely difficult, for example, to estimate how much time would be required for meetings with a particular LEA or school, or special procedures to be followed before LEA approval of study plans could be obtained. In a small number of sites, more than one site visit was needed to complete all site development tasks.

Visits were made to a total of 127 LEAs in the 44 sites[1] initially selected for participation in the study, or an average of three per site. Visits took place during the course of a month and a half, with most sites requiring about a week to complete all site development tasks. Although several LEAs expressed reluctance about their participation in the study in the follow-up calls, all agreed to meet with on-site staff to get further details about study objectives and plans. A small percentage of LEAs (5.5%) were not willing to permit the rostering of classrooms in schools under their jurisdiction. Several sites had to be eliminated as study sites as a result of LEA refusal:

- Arizona, Tucson selected as an alternate for Los Angeles objected to the measurement battery selected for the study and was unwilling to give approval. The remaining LEA selected in this site was located in a rural community and therefore was not suitable as a back-up for the Los Angeles site.

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[1] The 43 sites originally selected for the study and Tucson.

- Arkansas, Little Rock and Pulaski County, a site with three LEAs. The LEA with the largest number of schools and Head Start graduates (Little Rock) declined to participate because of other studies under way in the school system. Too few Head Start graduates were enrolled in the two remaining LEAs to make this a viable site.
- District of Columbia, Washington, with one LEA. Following a lengthy review of study plans, the LEA refused to become involved.
- Georgia, Chattahoochee and Muscogee Counties. One of the two LEAs, the Columbus Public School District, declined to participate since sponsorship of the Head Start program in the city had recently been transferred from the school system to a different agency. This site was selected for its urban characteristics. Since the remaining LEA in this site was primarily rural in nature, the site was eliminated from the study.
- Idaho, Nampa, with one LEA refusal leaving an insufficient sample of Head Start graduates in the two remaining LEAs.

School Visits and Classroom Rostering. In the remaining 39 sites, the meeting with LEA superintendents was followed up with visits to selected local schools for classroom rostering. A total of 227 schools were requested to permit the classroom rostering. This averaged out to six schools per site. Five schools (or 2%) refused to become involved even in the initial stages of the study. Classrooms were rostered by on-site staff in the local schools using Head Start graduate rosters and student lists for kindergarten and/or first grade classes. Some schools were not permitted by LEA regulations to provide the student list to staff, but were willing to roster classrooms on our behalf and to indicate the total number of Head Start graduates in each class from each of the centers under study.

A total of 767 classrooms were rostered in the 39 sites, or an average of three per school. Roster information (number of Head Start graduates by center in each of the classrooms) was transmitted by telephone to Cambridge for the selection of a subsample of classrooms and schools in each site. The subsample was drawn immediately after all schools were rostered to permit staff to approach LEAs and schools to request permission for data collection tasks of the study.

In most sites, fewer Head Start graduates were enrolled in schools selected for participation in the study than had been indicated in the Head Start center records. Additional schools in nine sites not included in the original sample were selected for rostering purposes to increase the total number of Head Start graduates to a minimum of 30 per site.

A subsample of 180 schools was selected (or 80% of the total) for participation in the study based on classroom rosters. This was an average of five schools per site. Seven sites had more than five schools, however. Of all the classrooms that were rostered, 58% (or 445) were included in the subsample (an average of 12 classrooms per site or two per school). More than 12 classrooms were selected in 15 of the sites.

LEA and School Participation. The next task in the site development process was to inform LEAs and local schools of the subsample selection and to obtain permission for the schools' participation in the study. In most sites, this necessitated additional meetings with LEA and school personnel. Approval for the distribution of parent permission letters and data collection was obtained during initial site development visits in some of the sites.

Once LEAs and schools expressed their willingness to participate in the study, parent permission letters were prepared for distribution in selected classrooms. Parent permission letters contained a unique identification number for each child that indicated school ID, class ID, and Head Start status of the child. The parent permission letters explained the study to the parents in simple language and requested the family's permission to involve the child in the study. In addition to the parent permission, parents were asked to complete a brief questionnaire to provide information about the child's preschool experience as well as family income. This information was needed to identify a group of children who were eligible for Head Start in terms of income but did not receive any Head Start services prior to entering school. A self-addressed, stamped envelope was included with the letter to make it easy for parents to return the parent permission form.

Parent permission letters were distributed to pupils by teachers in accordance with the provisions of the Freedom of Information and Privacy Act of 1974, which prohibits schools to disclose parent name and address without parental permission. The parent permission package was accompanied by a memorandum for teachers that provided essential information about the study.

Community Interviewer Recruitment. An on-site staff of two community interviewers was recruited during the site development visit to assist with site development activities--distribution of parent permission letters, followup with families where possible, and to collect parent and child data. Prior to the on-site visits, contact was made with State Employment Agencies requesting referrals of candidates with required qualifications for the position. Advertisements also were placed in local newspapers in each of the Head Start communities, requesting resumes or letters of interest. Qualified candidates were contacted for a personal interview by staff during the course of the site visit.

Interviewers were selected on the basis of the following criteria:

(1) experience with young children and low income families;
(2) experience with testing and interviewing; and
(3) sufficient time availability for the job and access to a car.

Special attention was paid in the interview to the ability of candidates to relate to young children and their sensitivity to poverty conditions. An effort was made to recruit staff from the same ethnic backgrounds as those of the Head Start graduates that would be involved in the study.

Parent Permission Followup. Followup parent permission letters were distributed by community interviewers in at least 40% of the selected classrooms in an attempt to increase the response rate. Where possible, contact was made with the parents of Head Start graduates by telephone or a personal visit to insure an adequate Head Start sample in each of the sites. This personal followup procedure was possible only with the Head Start group since addresses had been obtained from centers. Such information could not be obtained for the non-Head Start group. Personal followup attempts with parents of Head Start graduates was not feasible in a number of instances because parents had moved; their phones were disconnected or unlisted; or addresses were not specific enough to locate the family (such as P.O. Box and Rural Route numbers). Despite these followup attempts, the response rate was extremely poor.

Final Site, School and Classroom Selection. The final selection of sites was based on site characteristics as well as on the adequacy of the Head Start and non-Head Start groups. If feasible, the primary sites identified during initial site selection were chosen as final sites. One primary site (Las Cruces, New Mexico) was dropped on the basis of sample size and was replaced by the DeSoto and Natchitoches Parishes, Louisiana site. Two additional alternate sites were included in the final sample to increase the overall size of the Head Start and non-Head Start groups: Selma, Alabama and Sioux City, Iowa.

Decisions regarding final site selection were not reached until the third week in November. By that time, a small number of primary sites had already started data collection.

Once final sites had been selected, a sample of Head Start and non-Head Start children was drawn for each of the sites, based on family background data obtained from all non-Head Start families. Criteria for selecting the non-Head Start group included: (1) Head Start eligibility determined on the basis of eligibility guidelines for the program; and (2) the child's preschool experience. Although preference was given to eligible children without preschool experience, it was not feasible to adhere to either criteria in most sites since a large number of children were involved in a preschool program prior to entering school. Families with per capita income most closely corresponding to eligibility guidelines were selected.

Although study plans called for the selection of equal groups of Head Start and non-Head Start children within each class, the distribution of groups was frequently uneven as a result of poor parent response.

In a third of the sites (11), the total number of schools selected for participation in the study was reduced; the same was the case in 75% of the sites in terms of the number of classrooms participating in data collection. In all, 136 schools participated in the study (or an average of four per site) and 305 classrooms (an average of 9.5 per site or two per school). Data collection procedures are described in detail in Section 4.4.

As sites, schools or classrooms were dropped, letters were sent to LEA superintendents, school principals, and parents with copies to SEAs (State Education Agencies). Similarly, letters were sent to all parents not selected for participation in the study thanking them for their willingness to become involved.

4.4 DATA COLLECTION

Data collection in each of the 32 sites could not be started until final site selection had been completed and a Head Start and non-Head Start sample was drawn. Data collection was initiated in 27 of the sites in mid-November, although with only a partial sample of Head Start and non-Head Start families. The final sample was drawn immediately after the Thanksgiving holiday.

Training was conducted for community interviewer staffs for all but one of the sites in four locations: Atlanta, Georgia; Boston, Massachusetts; Kansas City, Missouri; and Salt Lake City, Utah. The first two one-week training sessions were conducted in Atlanta and Boston starting mid-October, and the following week in Kansas City and Salt Lake City. The two California community interviewers due to late recruitment were provided training on-site.

The training sessions were preceded by a session to prepare trainers and to establish procedures to insure that uniform training procedures were followed in each of the training sites. This was crucial to the success of the study, given the complexity of child measures, and the necessity to alter administration and scoring procedures during the course of training. Once the training sessions got underway, training directors were in frequent touch to discuss training procedures, the training process and specific difficulties with the child and parent measures.

Trainees were trained in the administration and scoring of three individual child measures, two group measures for children, and a parent interview. The following process was used for training purposes:

- Demonstration of measure by trainer
- Discussion of demonstration
- Review of administration manual
- Demonstation of measure by trainer
- Individual practice with protocols.

The length of time spent on training and practice of the various instruments varied depending upon the level of difficulty. Listed below is the minimum number of hours each community interviewer spent on each measure:

Wide Range Achievement Test	9 hours
Values Inventory X and Y	7 hours
Friendship Choices	4 hours
Motor Inhibition Test	3 hours

In addition, each tester practiced individually on an "as needed" basis. Considerable time was spent on the parent interview and the manual of data collection field procedures.

To determine the testing/interviewing skill level of each community interviewer, a checkout procedure was used at the end of the training session. Each community interviewer administered each of the measures to a trainer who role played a child; both interviewer and trainer scored the test. Afterwards the scoring was compared and the performance discussed. Additional training was provided to the interviewer if his/her performance was not adequate. Adequacy was determined by specific performance criteria established for each measure. This checkout procedure was repeated on site with all of the community interviewers before the start of actual data collection. This was especially important given the time lapse between training and data collection (which in some sites was more than five weeks).

Following the training sessions, community interviewers were responsible for followup to the parent permission with the Head Start group and the redistribution of letters in selected classrooms. In addition to assisting with site development, on-site community interviewer staffs were required to practice the parent and child measures periodically with children in the appropriate age group.

Data Collection Start-up. As soon as the Head Start and non-Head Start sample was drawn for a particular class or school, class rosters and signed parent permission letters were forwarded to community interviewers. Staff were asked to schedule a visit to the school to discuss the data collection schedule with principals and teachers, to identify a suitable location for individual child testing, and to set up a schedule for group and individual child data collection sessions. In some of the schools, a demonstration of the parent and child measures was given to familiarize school personnel with the study. Signed parent permissions for each child were provided to schools in the sample to become a part of the permanent child school records.

Prior to data collection, one of the training staff made a visit to the site to review the measurement battery and to conduct a final checkout of the interviewer's performance. Additional training was provided to on-site staff as well as an additional checkout for those who did not perform according to criteria set for the study. In four of the 32 sites, the performance of one interviewer was not deemed satisfactory even after additional training had been provided; these interviewers were assigned responsibility for parent interviews only.

In other sites, it was necessary to hire additional parent interviewing staff because on-site staff had found other jobs or were unable to do the work as a result of illness, family problems, etc.

Data Collection. Once a schedule had been set up for the data collection with schools and teachers, on-site interviewers visited the classrooms prior to data collection to get acquainted with the children, the teacher's style and classroom routine. This procedure was designed to allow the children to become familiar with the interviewer and to feel more at ease. The child measurement battery was conducted with children in two sessions. In the first 30-minute session three measures were administered individually to each of the Head Start and non-Head Start children selected for the study. The instruments were administered in the following order: (1) Motor Inhibition Test (MIT), Wide Range Achievement Test (WRAT), and Friendship Choices. These individual sessions were followed by a half-hour group testing session with all Head Start and non-Head Start children in the class in which two parts of the Values Inventory for Children (VIC) were administered. Group activities were conducted only with those children selected for participation in the study whose parents had given permission for their child's involvement.

The order of instrument administration was the same for all children in the study, although the group testing sessions in some instances preceded the individual testing sessions, if dictated by unusual weather conditions or vacation schedules of schools. Group testing sessions were then conducted in the home at the time of the parent interview.

Although plans called for two interviewers to be present during the group testing session to insure adequate staffing, this procedure was not followed consistently given the time constraints of the overall study, as well as staffing problems discussed above.

As soon as the Head Start and non-Head Start sample was selected, letters were sent to principals of study schools with a request for information from teachers in classrooms under study. In addition to completing a background questionnaire, teachers were asked to rate each child in the sample. At the same time, principals were requested to specify hourly salary. Payment was made by check either to the school or teacher upon receipt of the teacher data, and was accompanied by a thank-you note.

Followup calls were made to non-responding schools in early January in an effort to increase overall response. This yielded only moderately successful results (teacher data was not obtained for 23.3 percent of the children in the sample).

A request for additional data from Head Start centers under study also was made to Head Start Grantee and Delegate Agencies in each of the sites. These requests were followed up by telephone calls in early February, resulting in a final response rate of 82.5 percent of the centers.

As was noted earlier, an effort was made to complete all data collection activities by the end of the year. This was not feasible, however, since a number of schools did not permit testing to take place in the schools after December 15 because of special holiday celebrations; final testing was scheduled to immediately follow the school Christmas vacation. In some of the sites, schools were closed for a significant portion of both December and January because of weather conditions (Buffalo, New York; Owensboro, Kentucky; and some schools in West Virginia, Virginia and Ozark and Howell Counties, Missouri). The three sites which started the data collection first were able to complete their work before schools closed for the Christmas holidays. By the end of January an additional fifteen sites had completed data collection. The remaining sites finished up their data collection the first two weeks in February. In five of these sites, training staff and community interviewers from other sites assisted in completing data collection since on-site staff had started other full-time work at the beginning of the year.

In the sample of 1728 children for whom any data were available, the incidence of missing data was relatively high, primarily due to schedule slippage and other factors beyond our control (snow, school vacations, etc.). Parent interviews and individual tests were obtained for 70.8%; parent interviews and group tests for 59.3%; and parent interviews and teacher ratings for 62.2% (See Table 4.1).

Table 4.1

INCIDENCE OF MEASURES OBTAINED FOR CHILDREN IN SAMPLE

Analytic Data Set	Head Start Children		Non-Head Start Children		TOTAL	
	N	%	N	%	N	%
Sample for whom data were obtained	757	100 %	971	100 %	1728	100 %
At least WRAT	693	91.5%	885	91.1%	1578	91.3%
At least TR	574	75.8%	750	77.2%	1324	76.6%
At least VIC	539	71.2%	684	70.4%	1223	70.8%
PI + WRAT	531	70.1%	692	71.3%	1223	70.8%
PI + TR	453	59.8%	621	64.0%	1074	62.2%
PI + VIC	442	58.4%	583	60.0%	1025	59.3%
PI + WRAT + TR + VIC	348	46.0%	458	49.9%	806	46.6%

Key: WRAT = Wide Range Achievement Test
TR = Teacher Rating
VIC = Values Inventory for Children
PI = Parent Interview

4.5 DATA QUALITY

A weekly monitoring system was set up for the data collection period to determine the quality of data that were obtained from parents and children in the study. The system was similar to the one used for training checkout and required one community interviewer accompanying another on a scheduled testing visit once a week. During the monitoring visit, the monitor scored along with the tester on all individual child measures so that inter-judge reliability between testers could be determined. The monitor also noted errors in the measurement administration in order to assess the impact on data quality.

On the average, 5.4 percent of all test administrations were monitored. Table 4.2 lists the inter-judge reliability between testers on each of the individual child measures.

Table 4.2

Inter-judge Reliability of Scoring	
Motor Inhibition Test	98.0%
Wide Range Achievement test	99.0%
Friendship Choices	99.4%
Average	98.8%

The largest scoring discrepancy occurred on the Motor Inhibition Test. Almost half (47%) of the discrepancies were in indicating if the child had actually made an error, that is had the child stepped on the line or not.

Inter-judge reliability for the individual child measures compares favorably with that obtained for a similar study, the National Home Start Demonstration program evaluation which achieved a 97.5% inter-judge reliability during the final data collection phase.

Table 4.3 below shows the average number of administration errors for each of the measures and the parent interview.

Table 4.3

Average Number of Administration Errors
Per Measure Administration

Individual Child Measures	
Motor Inhibition Test	0.4
Wide Range Achievement Test	2.0
Friendship Choices	0.3
Average	2.7
Group Measures	
Values Inventory X-booklet	1.0
Values Inventory Y-booklet	0.3
Average	1.3
Parent Interview	1.4

Although a weekly monitoring system was instituted it was sometimes impossible to adhere to this schedule. Monitoring activities were limited to initial start-up monitoring by trainers in thirteen sites primarily because responsibility for parent and child data collection was split as was noted previously, or all data collection was conducted by an interviewer staff of one. In one site, no monitoring was done because of the extreme distances between the two interviewers and the schools they were working in.

SECTION II

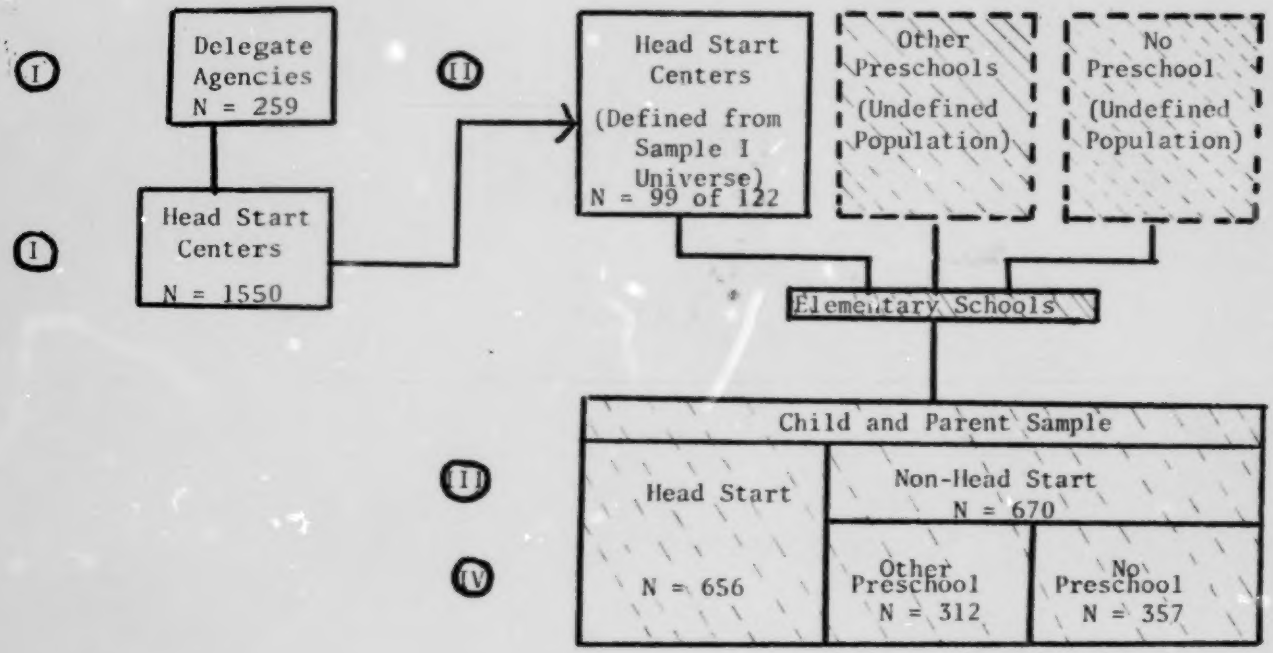
In this section, we present data from two sources. Subsection 5.1 presents data gathered from Delegate Agencies (N=259) and their Head Start Centers (N=1550). Subsection 5.2 presents the results of the survey of the Head Start Centers (N=99) which the sampled Head Start graduates attended.

SAMPLE I:

Delegate Agencies

SAMPLE II:

Children and Parents



I
Delegate Agencies N = 259
I
Head Start Centers N = 1550
II
Head Start Centers (Defined from Sample I Universe) N = 99 of 122
Other Preschools (Undefined Population)
No Preschool (Undefined Population)
Elementary Schools
Child and Parent Sample
III
IV
Head Start N = 656
Non-Head Start N = 670
Other Preschool N = 312
No Preschool N = 357

INSTRUMENT SET

I. Delegate Agency Survey
II. Head Start Center Questionnaire
III. Parent Interview
IV. Child Test Battery

CHAPTER FIVE

HEAD START PROGRAM CHARACTERISTICS

5.0 INTRODUCTION

This chapter presents a description of Head Start programs. Data from the Delegate Agency Survey are presented together with estimates of the national program features. The Head Start Facilities and Resources Questionnaire provides information about the basic characteristics of Head Start centers. These data give a picture of what a typical center might look like in terms of size, funding, location, staffing and programs. Rather, the information is presented to inform the reader and the Office of Child Development of the characteristics of a nationally representative sample of Head Start programs. Although a management information system is currently being implemented by OCD, systematic program information was lacking at the inception of this study. In addition, our surveys found that many changes had taken place since the last information on programs was available. The results of the present surveys may be used by OCD to compare present Head Start programs to past studies and to provide an external benchmark for future management information data. Detailed analyses of sample characteristics for questions of representativeness are presented in subsequent chapters.

5.1 THE DELEGATE AGENCY SURVEY

There were 1,511 Delegate Agencies in the original sampling frame. These agencies were sampled from twelve strata defined by region (Northeast, Southeast, Southwest, and West and California) and city size (urban, small town, and rural.) Table 5.1 presents data for the 271 agencies randomly sampled from the stratified sampling frame. The data presented here describe the agencies' centers, as well as some characteristics of children who attend them by region, by city size, and for the total group. From these data a population estimate is presented; this estimate is based on initial sampling probabilities for the agencies involved. Table 5.2 describes the expected,* the sampled and the estimated totals of Head Start children by region, by city size and by total group. While most of the estimates are in close agreement with expected values, based on original Office of Child Development documentation, it should be noted that in two of the strata, the urban southeast and the urban west, there are considerable discrepancies between estimated and expected population values. These discrepancies may be seen as the result of the difference between the 1974 program and the 1976 program. The expected and estimated values are estimates of real-world program values. Program values will vary to the extent local Head Start funding levels have varied; that is, as an agency's funding increases or decreases, so do the number of centers it is able to operate and the number of children it is able to serve.

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*Expected population values are provided by data from a 1974 OCD study of handicapped children in 95% of Head Start centers.

Table 5.1 provides data on Head Start Center characteristics and on the children they serve, across strata. Remembering that the number of agencies sampled varies as a function of the number of children expected in a given stratum, we see that there are proportionately more centers in the northeastern strata; these centers in the northeast are concentrated in urban areas, as are agencies in other regions, with the exception of the southeast. In the southeast, there are more agencies in the small town and rural areas; although it must be remembered that the figures for the urban southeast must be considered much too low.

There are more centers located in the northeast urban stratum than in any other stratum or regional group of strata, both for the sample and for the estimated population. Since three out of four very large grantees are located in this stratum (New York, Chicago, and Washington, D.C.; the fourth is Los Angeles), these figures are not unexpected. The southwest region has the fewest centers, but the difference between it and the southeast and west is not nearly as striking as the difference between the northeast and all other regions.

The number of children sampled in each stratum varies with the number of children initially available for sampling in each stratum. That is, the sampling fraction is a function of the proportion of children served by Head Start in each stratum. Of the 64,218 children served by the delegate agencies sampled, 36% are in the northeast, 26% in the southeast, 18% in the southwest, and 20% in the west (which includes California.) The estimated numbers, in the order presented above, are 45%, 26%, 15%, and 17%. We find 47% of the children sampled in urban areas, with 51% estimated; 25% in small

Table 5.1

Head Start Centers' and Their Childrens' Characteristics by Region and City Size and Overall, for the Sample of Delegate Agencies and the Total Estimated Population

Strata / Variables	NORTHEAST				SOUTHEAST				SOUTHWEST				WEST and CALIFORNIA				CITY SIZE			Overall
	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Totals
Number of Agencies																				
Sample (adjusted*) Respondents	72	18	32	122	5	20	25	50	9	10	17	36	24	23	16	63	110	71	90	271
Non-Respondents	5	3	2	10	2	1	2	5	0	1	2	3	2	1	1	4	10	6	7	23
Total** N	367	133	165	665	54	84	134	272	59	53	111	223	153	90	108	351	633	360	518	1,511
Number of Centers																				
Sample N	393	96	122	611	39	117	173	329	92	82	109	283	159	50	118	327	683	345	522	1,550
Population Estimate N	1,676	431	531	2,638	274	386	669	1,329	315	237	329	881	496	214	320	1,030	2,761	1,268	1,849	5,878
Number of Children/Stratum																				
Sample N	17,012	2,797	3,564	23,353	2,382	6,988	7,068	16,149	4,776	3,499	3,889	11,528	6,343	2,886	3,959	13,188	30,444	15,950	17,824	64,218
Population Estimate N	68,136	11,843	14,784	94,763	12,157	20,932	25,295	58,415	14,563	9,505	8,699	32,767	19,189	9,896	10,272	39,358	114,077	52,176	59,050	225,303
Number of Children/Center																				
Sample $\bar{X}$	43.8	29.4	29.0	38.6	59.3	57.8	41.3	49.4	51.9	42.7	29.8	40.7	39.9	58.9	33.6	40.5	44.9	46.5	34.3	41.7
Population Estimate $\bar{X}$	32.7	31.6	24.6	31.0	50.0	55.8	34.9	43.5	49.5	40.7	33.0	41.4	36.1	51.5	26.5	35.4	36.2	44.4	29.9	35.7
Children by Age/Center																				
3 year olds Sample $\bar{X}$%	22%	25%	25%	23%	12%	17%	9%	12%	28%	26%	15%	22%	15%	21%	13%	15%	21%	22%	15%	19%
Estimated Population $\bar{X}$%	17	22	20	18	5	13	8	9	26	25	15	22	13	23	8	13	16	20	13	16
4 year olds Sample $\bar{X}$%	74	68	50	70	37	43	37	39	53	47	48	50	81	69	71	76	70	55	53	61
Estimated Population $\bar{X}$%	76	68	69	74	24	48	39	39	57	47	50	52	83	67	77	78	72	58	57	64
5 year olds Sample $\bar{X}$%	4	7	16	7	51	40	54	49	19	27	36	28	4	10	15	9	9	23	32	20
Estimated Population $\bar{X}$	7	9	11	8	71	39	52	52	17	28	35	26	4	10	15	9	12	22	30	20
Percent of Centers open 4 days/ week or less																				
Sample	2.6	26.1	27.0	11.2	0.0	1.7	22.5	12.5	0.0	2.4	1.8	1.5	33.5	24.5	23.7	28.6	9.3	11.9	19.5	13.4
Estimated Population	10.1	39.5	42.7	20.1	0.0	4.9	33.7	19.7	0.0	6.8	3.5	3.1	38.7	17.2	42.5	36.2	13.2	18.4	34.1	20.7
Percent of Centers Serving>80% of these Ethnic Groups:																				
Hispanic Sample	5.9	0.0	0.0	3.8	7.7	0.0	0.0	0.9	30.4	8.5	27.6	23.0	13.9	8.2	5.1	9.8	11.2	3.2	4.8	7.9
Estimated Population	4.4	0.0	0.0	3.0	2.9	0.0	0.0	0.5	31.2	6.9	28.0	23.0	14.5	6.0	8.0	10.7	8.6	2.3	5.3	6.3
American Indian Sample	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.0	0.0	0.2	0.1
Estimated Population	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.6	0.0	0.0	0.3	0.1
Asian Sample	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Estimated Population	0.1	0.0	0.0	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<0.1	0.0	0.0	<0.1
Black Sample	64.1	11.4	3.3	43.6	58.9	48.7	37.0	43.8	48.9	31.7	5.5	27.2	40.5	0.0	1.7	20.4	56.2	27.3	14.6	35.1
Estimated Population	55.7	20.8	1.9	40.9	47.3	53.4	35.8	42.7	49.5	31.5	4.6	29.2	27.8	0.0	0.3	13.3	49.8	30.0	14.5	34.9
White Sample	1.1	36.4	76.2	21.7	5.2	23.9	26.6	23.1	1.1	14.6	18.4	11.7	4.4	20.4	50.9	23.7	2.1	24.7	41.9	20.6
Estimated Population	2.7	51.5	84.9	24.9	11.8	14.3	28.6	21.7	0.7	18.7	14.3	10.5	12.9	22.6	53.5	28.8	5.0	28.5	48.6	24.1

*Based on 95% OCD Sample.

**The original sample N was lowered in some cases by deletion of defunct agencies, pilot participants, and agencies with other program involvement where participation in this survey would have been burdensome.

Table 5.1 (Continued)

Strata / Variables	NORTHEAST				SOUTHEAST				SOUTHWEST				WEST and CALIFORNIA				CITY SIZE			Overall
	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Totals
Other Sample	0.0	0.0	1.6	0.4	0.0	0.9	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.3	0.0	0.6	0.4	0.3
Estimated Population	0.0	0.0	1.4	0.2	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.3	0.0	0.4	0.4	0.2
Percent of Centers Reporting 100% full-time* attendance																				
Sample	46.9	32.6	52.1	45.3	97.4	66.1	79.6	76.7	94.4	53.1	73.8	74.5	53.5	28.6	36.9	44.0	59.3	48.2	62.3	57.7
Estimated Population	66.3	56.1	56.8	62.7	99.0	76.6	69.9	77.4	94.8	62.3	76.1	78.9	42.8	44.8	37.0	41.2	67.6	61.9	60.2	64.1
Percent "Integrated"**Centers																				
Sample	28.5	51.0	18.9	30.1	28.2	26.5	36.4	31.9	19.6	45.1	48.6	38.2	41.1	69.4	41.5	45.5	30.2	43.9	36.0	35.2
Estimated Population	36.9	26.3	11.8	30.7	38.0	31.9	35.6	35.0	18.7	42.8	53.2	37.3	44.7	70.0	36.7	46.3	36.6	38.4	31.0	35.2
Percent Centers Serving 10% or Fewer Children with Family Incomes Above Poverty Level																				
Sample	87.9	45.3	74.4	78.1	74.4	86.3	91.0	87.3	85.6	85.4	75.0	81.4	94.2	80.9	76.9	85.9	88.3	73.9	80.5	82.3
Estimated Population	85.0	66.6	62.7	72.5	90.2	79.1	88.6	86.2	86.2	86.7	79.6	84.1	92.6	86.6	63.7	81.4	81.4	77.8	74.4	78.5
Percent of Enrolled Children Graduated																				
Sample X̄%	80	87	68	79	68	52	79	68	57	62	75	65	80	75	79	79	76	67	76	74
MED%	90	99	71	87	65	51	87	66	52	59	79	62	87	74	83	86	81	67	80	77
Estimated Population X̄%	80	79	76	79	77	62	81	75	62	59	77	66	82	74	86	82	79	69	80	77
MED%	82	90	80	82	74	62	90	76	60	53	82	62	91	68	90	89	82	68	86	82
Percentage of Centers Reporting Availability of Public Kindergarten																				
Sample	99.2	97.9	96.7	98.5	100.	56.4	66.1	66.7	98.9	92.6	92.7	94.6	100.	98.0	94.1	97.5	99.4	82.5	85.3	90.8
Estimated Population	98.1	96.8	96.6	97.7	100.	63.8	68.6	73.0	99.3	89.3	96.1	95.3	100.	98.5	95.9	98.3	98.7	85.1	86.3	92.3
Number of Schools Receiving Children from Centers																				
Sample X̄	3.5	4.5	2.8	3.6	3.1	2.4	2.1	2.3	3.2	2.3	1.6	2.3	3.7	5.7	1.9	3.3	3.5	3.4	2.1	3.0
MED	2.4	4.1	2.6	2.7	2.2	2.0	1.6	1.9	1.9	1.7	1.2	1.4	2.8	5.6	1.3	2.3	2.4	2.4	1.5	2.1
Estimated Population X̄	4.0	4.4	2.8	3.8	3.2	2.6	2.1	2.4	3.1	2.5	1.5	2.4	4.5	6.5	2.6	4.2	3.9	3.8	2.3	3.4
MED	2.9	4.1	2.7	2.9	2.3	2.1	1.5	1.9	1.9	1.6	1.2	1.4	4.0	6.2	2.0	3.4	2.8	2.7	1.8	2.4
Percent of Graduates Entering Kindergarten																				
Sample X̄%	97.6	87.6	84.0	93.3	55.6	23.7	35.8	33.9	73.5	69.6	73.7	72.4	97.9	95.0	90.2	94.7	92.0	62.3	67.2	77.1
Estimated Population	99.0	82.5	97.3	94.7	22.4	33.8	39.1	34.6	79.5	64.0	73.7	73.0	95.5	92.7	91.9	93.8	90.5	64.8	68.4	78.8

*Full time is defined as 4 or more hours each day for five days a week **Integration defined AS 21-80% ANY ETHNIC GROUP

Table 5.1 (Continued)

Strata / Variables	NORTHEAST				SOUTHEAST				SOUTHWEST				WEST and CALIFORNIA				CITY SIZE			Overall
	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Total	Urban	Small Town	Rural	Totals
Number of Children Served in Each Ethnic Group:																				
Hispanic Sample	2,809	198	37	3,044	240	16	1	257	1,495	377	1,202	3,074	1,934	1,116	458	3,508	6,478	1,707	1,698	9,883
Estimated Population	6,923	841	174	7,938	580	39	<1	620	4,288	1,121	4,187	9,597	6,216	3,254	2,140	11,610	18,007	5,255	6,503	29,765
Native American Sample	58	21	64	143	0	3	0	3	0	66	246	312	36	98	114	248	94	188	424	706
Estimated Population	78	89	285	452	0	7	0	7	0	241	420	661	153	306	800	1,259	231	643	1,505	2,379
Asian Sample	301	54	13	368	4	13	2	19	11	4	4	19	68	65	29	162	384	136	48	568
Estimated Population	375	103	56	534	10	49	11	70	27	9	15	52	286	223	112	620	697	385	195	1,276
Black Sample	12,379	790	730	13,899	1,806	4,652	5,143	11,601	2,855	1,942	587	5,384	3,354	255	832	4,441	17,703	7,639	7,292	35,325
Estimated Population	50,686	2,890	2,394	55,970	9,006	14,744	17,103	40,853	8,887	4,477	1,415	14,778	8,131	619	944	9,694	76,710	22,730	21,855	121,296
White Sample	1,197	1,675	2,565	5,437	202	1,972	1,918	4,092	414	1,094	1,188	2,696	844	1,276	2,516	4,636	2,657	6,017	8,187	16,861
Estimated Population	8,691	7,868	11,310	27,869	2,448	5,846	8,176	16,471	1,358	3,624	2,581	7,563	3,943	5,162	6,253	15,358	16,440	22,499	28,320	67,261
Other Sample	122	60	135	317	59	108	6	173	1	17	21	39	80	148	8	236	262	333	170	765
Estimated Population	832	57	562	1,451	141	236	13	389	5	33	77	114	333	433	26	792	1,310	758	678	2,747
Mean Class Size																				
Sample $\bar{X}$	29.2	20.6	18.2	25.6	18.6	18.6	19.1	18.9	17.8	16.6	18.3	17.7	25.7	18.5	18.7	22.1	26.2	18.7	18.6	22.0
Estimated Population $\bar{X}$	21.4	21.3	17.7	20.7	18.2	18.7	19.3	18.9	17.6	16.2	18.0	17.4	21.9	18.1	17.9	19.8	20.9	19.0	18.4	19.8

Table 5.2

Head Start Child Populations: Expected,* Sampled, and Estimated Totals by Region, Citysize, and Overall

Citysize / Region		Northeast	Southeast	Southwest	West & CA	Totals
Urban						
Expected	N	62,827	36,052	17,697	32,059	148,635
Estimated	N	68,136	12,187	14,563	19,189	114,077
Sampled	N	17,012	2,382	4,776	6,343	30,444
Percent of Total Sample	%	26%	4%	7%	10%	47%
Percent of Estimate	%	25%	20%	33%	33%	27%
Small Town						
Expected	N	17,220	22,691	9,986	7,555	57,452
Estimated	N	11,843	20,932	9,505	9,896	52,176
Sampled	N	2,797	6,988	3,499	2,886	15,950
Percent of Total Sample	%	4%	11%	5%	5%	25%
Percent of Estimate	%	24%	33%	37%	29%	31%
Rural						
Expected	N	13,777	22,663	11,162	11,856	59,458
Estimated	N	14,784	25,295	8,699	10,272	59,050
Sampled	N	3,564	7,068	3,889	3,959	17,824
Percent of Total Sample	%	6%	11%	6%	6%	28%
Percent of Estimate	%	24%	28%	45%	39%	30%
Totals						
Expected	N	93,824	81,406	38,845	51,470	265,545
Estimated	N	94,763	58,414	32,767	39,357	225,303
Sampled	N	23,373	16,438	12,164	13,188	64,218
Percent of Total Sample	%	36%	26%	18%	20%	100%
Percent of Estimate	%	25%	28%	37%	34%	28%

*Based on OCD Documentation, 1974 Data, 95% Sample.

towns, with 23% estimated; and 28% in rural areas, with 26% estimated.

Head Start centers located in rural areas have, on the average, fewer children per center than urban areas or small towns. Somewhat surprisingly, the largest centers seem to be located in small towns rather than urban areas; the sampled agencies do not show a significant difference (44.9 urban vs. 46.5 small town), but the weighted estimates show an average of 8.2 more children in small town centers than in urban centers and 14.5 more than in rural centers. Over all regions, the southeast has the largest centers in the sample ($\overline{X}$ = 49.4); while this value is reduced by weighting to an estimated mean of 43.5, it is still the highest of the four regions and indicates an average of 12.5 more children per center than in the northeast and 8.1 more than in the west.

The distribution of children served by Head Start in terms of their age differs by region. Only 12% (estimate = 9%) of the children served in the southeast and 15% (estimate = 13%) in the west are three years old as opposed to 23% in the northeast (estimate = 18%) and 22% in the southwest (estimate = 22%). Forty-nine percent of children in the southeast are five years old (estimate = 52%) as opposed to 7% in the northeast (estimate = 8%), 28% in the southwest (estimate = 26%), and 9% in the west (estimate = 9%). The four-year-old population is higher in the northeast and west than in the southeast and southwest, both for the sample and the estimate population. This is explained, in part, by the centers in the southeast reporting the very low availability of public kindergarten for their graduates. In other areas where large proportions of five-year-olds appear, it is possible that Head Start serves children in lieu of kindergarten even when this public service is reported to be available or when public kindergarten is only available in these areas on a limited basis.

Overall, very few centers in the sample (13.4%) are open fewer than five days a week. However, in the small towns and rural areas of the northeast (26.1% and 27% respectively) centers are open four or fewer days a week. The estimates in all cases, except for western small towns, are higher than the obtained values for the sample.

Somewhat more than half (57.7%) of the children are reported to attend their centers on a full time basis (defined for survey purposes as four or more hours each day for five days a week). There is a considerable range in the reporting of these values across strata, (from 28.6% in western small towns to 97.4% in the urban southeast). The estimated values are higher in all cases but the rural southeast and the urban west.

The ethnic composition of centers varies widely across regions and city sizes. Data are presented as the percentage of centers in each stratum serving more than 80% of each ethnic group involved, the percentage of centers in each stratum serving 21-80% of any ethnic group, and the total number of children in each ethnic group served in each stratum.

Hispanic children account for 15% of those in sampled agencies (13% of the estimated total); Black children for 55% of the sample (54% of the estimated total); and White children for 26% (30% of the estimated total). The largest percentages of centers serving more than 80% Hispanic children are found in the southwest and west; within these regions and in the northeast and Southeast, most centers are located in urban areas, though many centers (27.6% of the sample and 28% of the population estimate) are found in rural areas of the southwest. Centers serving Native Americans are found only in rural areas of the west and California region. The reader is reminded that a population estimate cannot legitimately be made because certain programs, under the aegis of HEW Region XI (comprising migrant, Native American reservation, and other special agencies) were intentionally excluded from the sampling frame. Asian American centers are also notable for their absence, although it seems likely that there are such centers for whom we have not been able to project estimates. Only a small percentage (.3%) of centers serve more than 80% of these children, and those are in the urban northeast. Centers serving more than 80% Black children are found primarily in urban population centers and in the rural areas and small towns of the southeast. By the same token, centers serving more than 80% White children are found mainly in rural areas of the northeast and west with substantial numbers also found in the rural areas and small towns of other regions. Urban areas are especially noteworthy for their lack of centers serving large populations of White children.

Looking at these centers from a slightly different vantage point, we constructed a variable to serve as a measure of center integration. We asked which centers serve 21-80% of any ethnic group (the remainder, of course, being composed of one or more other groups). Overall 35% of the centers in our sample are integrated centers; the estimated percentage is the same. The estimates within region also duplicate values for the sample.

However, the estimate for urban areas is 6% higher than the sample, and the estimates for small towns and rural areas are about 6% lower. Only western small towns have a high percentage of integrated centers (about 70% sampled and estimated). The lowest percentages are found in northeastern rural areas (18.9% sampled; 11.8% estimated) and the urban southwest (19.6% sampled; 18.7% estimated). Other strata range from 26.2%-51% sampled and 26.3%-53.2% estimated.

5.2 HEAD START CENTERS

5.2.1 The Questionnaire and the Sample

The questionnaire was designed to elicit both factual information and attitudes from Head Start Center directors. Unfortunately, it was not possible to insure that the directors were the ones who completed the form. It is likely, in fact, that other center personnel actually completed the questionnaires. The reason for this is that for many of the questions, especially the factual ones, center records had to be consulted. This is more efficiently and economically done by a subordinate than by the director. In some cases, Delegate Agency personnel completed the form for the centers under their jurisdiction.

The analysis of the questionnaire was based on responses from 99 centers. Since the targeted sample was 120 centers, the response rate was a reasonably good 82.5%. Unfortunately, this response rate varied over the sampling frame. For example, there is no information from centers from small towns in the southwest. Thus, while several of the following analyses will present results by region and community type, it must be kept in mind that some strata are overrepresented in these estimates and others are underrepresented.

5.2.2 Analysis

The presentation consists principally of the display of means and proportions. Generally, only overall statistics are presented unless a more detailed inspection has suggested differences of interest.

The analysis itself started with an overall examination of the means and frequencies. Where particular policy questions were of interest, the relevant analyses were carried out. Otherwise, the decision to do more detailed analyses was based on the potential for variation among centers. For instance, many of the activities variables had rates over 90%. In these cases, no further analyses were done.

The principal variables for in-depth analysis were region and community type. The four regions were the northeast, southeast, southwest and west. The community types were urban, small town and rural. These represent the major variables underlying the sampling strata.

The variables which were to be used for the analysis of other instruments were of two types. The first consisted of a priori measures of size and staffing characteristics. The second consisted of categorical or ordinal variables relating to center orientation, the use of public school teachers and consultants, and the preparation of children for public schools. These latter variables were based on cross tabulations of the component variables and the identification of the most frequent combinations.

5.2.2.1 Characteristics

The characteristics data are displayed in terms of region and community type in Tables A5.1 through A5.7. Except for centers in the southeast small towns and rural sites, all the means are between 7 and 10 years. In general, the centers have been operating almost since the beginning of the Head Start program. Except for southwest urban and southeast small town sites, most centers have between 2 and 4 classes. Thus, most centers are of moderate size. The average class, computed by dividing the total enrollment of the center by the number of classes, has about 17 children and there seems to be little variation across the cells.

Centers are predominantly run by local community action agencies. Non-profit organizations and public schools account for about equal numbers of centers. The predominance of local community action agencies holds over all community types and all regions except the southeast. In the southeast, many centers are run by agencies whose affiliation was not specified. The other interesting observation is that public school auspices occur only in urban sites and tend to predominate over non-profit agencies in the southeast and southwest.

Centers are generally located in small to moderate sized cities. Large city centers predominate in the west and moderate city centers in the northeast. In southern regions, a larger proportion of centers operate out of small cities while centers in rural communities are generally found in western regions. Approximately 81% of centers are located in the communities they serve. The major variation is in the west and in small towns. The implication of this is that centers in the west are serving children from surrounding areas, outside municipal limits. That this should occur in small towns is probably due to the use of municipal limits as defining neighborhood, whereas rural areas probably use larger limits, e.g., county lines. In urban areas, of course, there are many children to be served in the neighborhood, regardless of how limits are defined.

There is little variation in center characteristics other than those easily explained by location. Thus, for instance, the predominance of centers operating out of small towns in southern regions is best explained by the prevalence of small towns in these regions. Also, the better equipped and better organized public schools are in urban areas making it more probable that public school sponsored programs would be found in these areas.

Finally, there was little variation by region or by community type for the proportion of centers using various admission criteria. The dominant criteria were, of course, income and age, pursuant to the guidelines. Presence of handicaps is also a frequent criterion. It is also the only one which showed any interesting variation. Specifically, more centers in the southwest (81.8%) and west (88.0%) used this criterion than in the northeast (45.7%) or southeast (36.8%).

5.2.2.2 Staffing and Training

The composition of center staff is given in Tables 5.3 and 5.4. Seventeen or 8.5% of centers reporting have a mean number of 1.23 full time administrators. Most centers have full time teachers and aides (about 3 of each on the average). A little over a third of the centers have volunteer aides and, on the average, have many of them. Outside of these categories, centers report full time administrators and support staff and part time staff in small numbers. Few centers have Hispanic, American Indian or Oriental staff. Centers are staffed almost exclusively by Blacks and Whites. A surprising finding is the reported distribution of staffing by ethnic group. White aides are reported in 65.7% of the centers. This means about 34% of the centers report no White aides. A subanalysis was performed which looked at the percentages of teachers (Tables 5.5 and 5.6) and of aides (Tables 5.7 and 5.8) which were in the Black and the White categories. Teachers are predominantly Black in southern small towns and rural areas. There is also a high percentage of Black teachers in western urban centers. At least 50% of aides are Black in most centers. The exceptions are northeast small town and rural centers. While these figures could be justified with a little stretch of the imagination, it is noted that only 67% of the centers report

Table 5.3

MEAN NUMBER OF STAFF IN SELECTED CATEGORIES FOR CENTERS

			FULL TIME	PART TIME	VOLUNTEER	CONSULTANT
ADMINISTRATORS		$\bar{X}$	1.235	2.235	0	2.571
		N	17	40	0	7
		%*	8.5	43.5	0	7.6
TEACHERS		$\bar{X}$	2.808	1.789	0	0
		N	78	19	0	0
		%	84.8	20.7	0	0
HEALTH PROFESSIONALS		$\bar{X}$	1.273	1.568	2.200	1.450
		N	11	44	5	20
		%	12.0	47.8	5.4	21.7
NUTRITION PROFESSIONALS		$\bar{X}$	1.636	1.000	1.500	1.176
		N	11	33	10	17
		%	12.0	35.9	10.8	18.5
SOCIAL SERVICE		$\bar{X}$	1.150	1.108	1.000	1.231
		N	20	37	3	13
		%	21.7	40.2	3.3	14.1
PARENT INVOLVEMENT		$\bar{X}$	1.000	1.139	1.000	1.000
		N	6	36	1	7
		%	6.5	39.1	1.1	7.6
AIDES		$\bar{X}$	3.188	2.310	10.714	0
		N	69	29	35	0
		%	75.0	31.5	38.9	0
SUPPORT STAFF		$\bar{X}$	2.895	1.657	2.000	1.200
		N	38	35	10	10
		%	41.8	38.5	11.0	11.0
TOTAL	Staff	$\bar{X}$	7.850	6.529	9.383	2.892
	Center	N	80	70	47	37

*

Table 5.4

MEAN NUMBER OF CENTER STAFF BY ETHNIC CATEGORY

STAFF		WHITE	BLACK	HISPANIC	INDIAN	ORIENTAL
SUPERVISORY	$\bar{X}$	1.810	1.250	1.000	0	0
	N	21	28	2	0	0
	%*	30.4	41.8	2.9	0	0
TEACHERS	$\bar{X}$	1.718	2.625	3.750	0	0
	N	39	40	4	0	0
	%	57.4	60.6	5.8	0	0
AIDES	$\bar{X}$	1.857	3.425	2.857	2.000	0
	N	35	40	7	1	0
	%	65.7	59.7	10.1	1.4	0
OTHER	$\bar{X}$	3.029	2.700	1.000	3.000	0
	N	34	30	9	1	0
	%	49.3	44.8	13.0	1.4	0

*

Table 5.5

AVERAGE PROPORTIONS OF TEACHERS WHO ARE BLACK

Region Community Type		Northeast	Southeast	Southwest	West	Total
Urban	$\overline{X}$	0.400	0.111	0.614	0.615	0.504
	N	10	3	7	13	33
	SD	0.394	0.192	0.456	0.463	0.437
Small Town	$\overline{X}$	0.143	0.838	0	0.250	0.536
	N	7	1	0	2	20
	SD	0.378	0.233	0	0.354	0.446
Rural	$\overline{X}$	0.139	0.938	0	0	0.353
	N	6	4	1	2	13
	SD	0.222	0.125	0	0	0.439
Total	$\overline{X}$	0.254	0.739	0.537	0.500	0.484
	N	23	18	8	17	66
	SD	0.362	0.352	0.475	0.468	0.438

Table 5.6

AVERAGE PROPORTIONS OF TEACHERS WHO ARE WHITE

Community Type \ Region		Northeast	Southeast	Southwest	West	Total
Urban	$\overline{X}$	0.600	0.889	0.243	0.385	0.466
	N	10	3	7	13	33
	SD	0.394	0.192	0.382	0.463	0.436
Small Town	$\overline{X}$	0.714	0.086	0	0.750	0.372
	N	7	11	0	2	20
	SD	0.488	0.177	0	0.354	0.451
Rural	$\overline{X}$	0.861	0.063	0	1.000	0.571
	N	6	4	1	2	13
	SD	0.222	0.125	0	0	0.459
Total	$\overline{X}$	0.703	0.215	0.213	0.500	0.458
	N	23	18	8	17	66
	SD	0.389	0.349	0.364	0.468	0.444

Table 5.7

AVERAGE PROPORTIONS OF AIDES WHO ARE BLACK

Community Type \ Region		Northeast	Southeast	Southwest	West	Total
Urban	$\bar{X}$	0.775	0.510	0.617	0.558	0.631
	N	10	3	8	13	34
	SD	0.343	0.500	0.480	0.480	0.436
Small Town	$\bar{X}$	0	0.714	0	0	0.393
	N	7	11	0	2	20
	SD	0	0.339	0	0	0.440
Rural	$\bar{X}$	0.056	1.000	0	0	0.333
	N	6	4	1	2	13
	SD	0.136	0	0	0	0.471
Total	$\bar{X}$	0.351	0.742	0.549	0.456	0.502
	N	23	18	9	17	67
	SD	0.444	0.352	0.494	0.482	0.457

Table 5.8

AVERAGE PROPORTIONS OF AIDES WHO ARE WHITE

Region / Community Type		Northeast	Southeast	Southwest	West	Total
Urban	$\bar{X}$	0.125	0.500	0.202	0.404	0.283
	N	10	3	8	13	34
	SD	0.317	0.500	0.356	0.495	0.422
Small Town	$\bar{X}$	0.929	0.241	0	1.000	0.557
	N	7	11	0	2	20
	SD	0.189	0.338	0	0	0.448
Rural	$\bar{X}$	0.778	0	0	1.000	0.513
	N	6	4	1	2	13
	SD	0.404	0	0	0	0.502
Total	$\bar{X}$	0.540	0.230	0.179	0.544	0.409
	N	23	18	9	17	67
	SD	0.479	0.349	0.339	0.502	0.458

Table 5.9

TRAINING FOR TEACHERS AND PARENTS

TRAINING	TEACHERS N	TEACHERS %	PARENTS N	PARENTS %
INSERVICE				
by Supervisors	97	99.0	81	82.7
by Consultants	90	92.8	75	77.3
UNIVERSITY				
One Week	24	24.5	9	9.2
Eight Weeks	12	12.4	4	4.1
LECTURES BY SPECIALISTS	80	82.5	74	76.3
CLASSES	78	79.6	20	20.4

enough information to compute the percentage figures. Thus, the results could be biased toward the extremes by differential response rates.

A large percentage of the centers provide in-service training and lectures for teachers and parents, although more for the former than the latter (See Table 5.9). Centers also provide for classes at a school or college for their teachers. Variations occur for in-service training of both types for parents and in the provision of classes for both teachers and parents. Table 5.10 shows that a major distinction arises between eastern and western centers. More of the western centers provide in-service training for parents and classes for teachers, while more of the eastern centers provide classes for parents.

With respect to community type, more centers from urban (94.1%) and rural (80%) areas provide classes for teachers and more centers from urban (26.5%) and small town (31%) provide classes for parents.

Table 5.10

TRAINING BY REGION

	NE		SE		SW		WT	
	N	%	N	%	N	%	N	%
In-service for Parents								
by Supervisors	26	74.3	16	72.7	11	91.7	28	96.6
by Consultants	23	67.6	15	68.2	12	100.0	25	86.2
Classes for Teachers	22	62.9	16	72.7	12	100.0	28	96.6
Class for Parents	11	31.5	7	31.8	0	0.0	2	6.9

5.2.2.3 Curriculum and Services

Table 5.11 gives the overall availability of various community resources to centers. In addition, the number using the available services is given. Except for comprehensive Health and Armed Forces Medical Centers, most centers have the specified resources available to them. For the most part, they use those services which are available.

Table 5.12 displays the major variations in resource availability by community type. The general pattern is that, again, urban centers are most likely to have the resources available while rural centers are least likely to have them.

Table 5.11

AVAILABILITY AND USE OF SERVICES

Service	Availability		Use	
	N	% of Centers	N	% of Available
Comprehensive Health Center	45	52.3	40	89
Medical Laboratory	77	83.7	76	99
Armed Forces Medical Facility	14	16.3	5	36
Public Health Clinic	95	96.9	95	100
Mental Health Clinic	86	89.6	75	87
Guidance Clinic	60	66.7	54	90
Speech Therapy Clinic	75	81.5	69	92
Psychological Services Clinic	89	95.7	87	98
Work and Recreation Facility	65	72.2	56	86
Family Counseling Agency	78	83.9	65	83
Family Planning Agency	87	92.6	63	72
Other Family/Child	76	87.4	64	84
Nutrition	94	97.9	90	96
Work Experience and Training	84	90.3	80	95
Community Work/Training	72	79.1	63	88

Table 5.12

Availability of Resources by Community Type

Resource	Urban	Small Town	Rural
Comprehensive Health Center	68.6%	50.0%	34.5%
Mental Health Clinic	97.1	100.0	72.7
Child Guidance Clinic	84.8	66.7	48.5
Speech Clinic	94.3	88.0	62.5
Work and Recreation	75.8	91.3	55.9
Family Counseling	97.0	96.0	61.8
Family Planning	97.0	100.0	81.8
Other Family/Child	91.4	90.0	81.2
Work and Training	96.7	76.9	65.7

There are few general patterns by region (Table 5.13) except that northeast centers are more likely to have the resources available and southeast centers are least likely to make use of them.

Table 5.13

Availability and Usage of Resources by Region

	Availability				Usage			
Resource	NE	SE	SW	WT	NE	SE	SW	WT
Mental Health Clinic	100.0%	81.0%	72.7%	90.0%	91.2%	76.5%	100.0%	85.2%
Guidance Clinic	90.6	50.0	58.3	53.6	93.1	55.6	100.0	100.0
Family Counseling	97.0	72.2	75.0	80.0	78.2	61.5	100.0	95.8
Family Planning	100.0	100.0	91.7	79.3	69.7	55.0	100.0	78.2
Other Family/Child	87.5	57.1	100.0	96.7	60.7	100.0	100.0	96.6

The frequency and importance of various Head Start Center activities are given in Table 5.14. Except for field trips and science, most centers provide these activities daily and consider them very important. Almost all activities are provided at least weekly and only one is ever considered less than important. The major variations are in the frequency of science activities and the importance of math activities. Basically, rural centers are more likely to have science activities weekly (77.1%) while urban and small town centers are more likely to have them daily

Table 5.14

FREQUENCY AND IMPORTANCE OF ACTIVITIES PROVIDED BY THE PROGRAM

ACTIVITY	FREQUENCY				IMPORTANCE		
	Daily	Weekly	< Weekly	Never	Very Important	Important	Not Important
DRAMATIC PLAY	94.9%	5.1%	0 %	0	86.0%	14.0%	0
CREATIVE EXPERIENCES	99.0	1.0	0	0	95.7	4.3	0
SCIENCE	43.9	52.0	4.1	0	44.6	55.4	0
MATH CONCEPTS	78.6	19.4	2.0	0	65.2	34.8	0
LANGUAGE DEVELOPMENT	100.0	0	0	0	98.9	1.1	0
SMALL MUSCLE DEVELOPMENT	100.0	0	0	0	93.5	6.5	0
LARGE MUSCLE DEVELOPMENT	90.8	9.2	0	0	83.9	16.1	0
FIELD TRIPS	2.1	23.7	73.2	1.0	35.5	64.5	0
CHILD SOCIAL SKILL DEVELOPMENT	99.0	1.0	0	0	92.5	7.5	0
ADULT SOCIAL SKILL DEVELOPMENT	92.5	7.5	3.1	0	72.0	28.0	0
PROBLEM SOLVING	88.8	10.2	1.0	0	80.6	18.3	1.1
HEALTH/SAFETY RULES	71.4	24.5	4.1	0	80.4	19.6	0
HEALTH HABITS	86.7	10.2	3.1	0	88.2	11.8	0
FOOD HABITS	90.7	7.2	2.1	0	90.2	9.8	0

(61.8% and 58.6%, respectively). Also, southwestern sites are more likely than other regions to have science activities daily (83.3% versus 37.1% for northeast, 50% for southeast and 31% for west). Urban centers are more likely to consider math activities very important and rural centers least (81.8%, 60.7%, 51.6% for urban, small town and rural, respectively). Southern centers place greater importance on math activities (81% for southeast and 91.7% for southwest) than northeastern (52.9%) and western (56%) centers.

Overall the Head Start centers provide a broad range of services and activities. Almost all academic and most social skill activities are provided with great frequency. There is little variation by region or community type. What little variation was present could be explained by the ability of the more urbanized centers to provide more resources and opportunities or by restrictions resulting from geographic location, e.g., the lack of seashores in the southwest.

5.2.2.4 Parent Involvement

The proportion of parents providing significant reinforcement of program objectives is given in Table 5.15. The frequencies are broken down by community type; there was no variation by region. The trend is toward greater parent involvement in rural centers and less in urban centers. This is consistent with the general notion that there is greater awareness of and participation in political and social issues in small communities, especially in rural areas, than in large urban areas.

Table 5.15

Proportion of Parents Providing Reinforcement of Program Objectives by Community Type

Proportions of Parents	Urban		Small Town		Rural		Totals	
	N	%	N	%	N	%	N	%
More than 75%	0	0.0	3	10.3	9	25.7	12	12.1
50-75%	11	31.4	9	31.0	11	31.4	31	31.3
25-50%	15	42.9	8	27.6	5	14.3	28	28.3
10-25%	3	8.6	6	20.7	9	25.7	18	18.2
Less than 10%	6	17.1	3	10.3	1	2.9	10	10.1

Table 5.16

PARENT PARTICIPATION IN CLASS ACTIVITIES

ACTIVITIES	FREQUENTLY		OCCASIONALLY		NOT AT ALL	
	N	%	N	%	N	%
BRING CHILD TO SCHOOL	51	52.0	44	44.9	3	3.1
PICK UP CHILD AFTER SCHOOL	46	47.4	49	50.5	2	2.1
WATCH OR HELP IN CLASS	46	47.4	48	49.5	3	3.1
JOINS CHILD FOR LUNCH	32	32.7	66	67.3	0	0.0
TAKES CHILD TO DENTIST, DOCTOR	62	63.3	34	34.7	2	2.0
HELPS IN CLASS WITH MATERIALS	39	39.8	55	56.1	4	4.1
BORROWS BOOKS OR TOYS FOR HOME	12	12.9	45	48.4	36	37.8
HELPS WITH SPECIAL PROJECTS	53	54.6	44	45.4	0	0.0
OTHER	23	71.9	8	25.0	1	3.1

Parent participation in the child's Head Start experiences is given in Table 5.16. All activities, with the exception of borrowing books and toys, occur frequently. The major variations have to do with transportation. Parents more frequently transport their children to and from the center in urban areas. They do this least frequently in small towns.

It was of interest to relate parent participation with parent reinforcement of the program. The entries in Table 5.17 refer to the percentage of centers in the reinforcement category that report frequent (as opposed to occasional) parent involvement in the activity. For instance, for centers reporting less than 10% parent reinforcement of program objectives, only 11.1% reports frequent parent involvement in watching or helping in the class. As might be expected, centers reporting greater parent support also report more frequent parent involvement. The inference is that parents who support the program are more likely to participate. However, it could be that directors who see a lot of parents in the classroom feel greater parent support. With only the present data to go on, the second inference has a slight edge. However, either inference could easily be justified.

Table 5.17

Percent of Centers with Frequent Parent Involvement by Percentage of Parent Reinforcement of Program

Involvement	% Parent Reinforcement				
	<10%	10-25%	25-50%	50-75%	>75%
Watch or Help in Class	11.1%	33.3%	40.7%	58.1%	83.3%
Helps with Materials/Equipment	30.0	16.7	29.6	54.8	66.7
Helps with Special Projects	40.0	16.7	69.2	71.0	50.0

Table 5.18

USE OF PUBLIC SCHOOL FACILITIES AND STAFF BY REGION AND COMMUNITY TYPE

	REGION								COMMUNITY					
FACILITY	Northeast		Southeast		Southwest		West		Urban		Small Town		Rural	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
BUILDINGS	13	40.6	5	31.3	3	30.0	5	19.2	4	16.0	11	42.3	11	33.3
OFFICES	8	25.0	3	18.8	0	0	0	0	0	0	7	26.9	4	12.1
ADMINISTRATORS	15	46.9	9	56.3	0	0	2	7.7	6	24.0	14	53.8	6	18.2
TEACHERS	19	59.4	10	62.5	1	10.0	9	34.6	9	36.0	18	69.2	12	36.4
CURRICULUM SUPERVISORS	9	28.1	4	25.0	6	60.0	3	11.5	12	48.0	7	26.9	3	9.1
CONSULTANTS	23	71.9	13	81.3	8	80.0	15	57.7	13	52.0	23	88.5	23	69.7
PROGRAM COORDINATOR	14	43.8	7	43.8	6	60.0	9	34.6	15	60.0	11	42.3	10	30.3
OTHER	7	21.9	1	6.3	1	10.0	11	42.3	12	48.0	4	15.4	4	12.1

5.2.2.5 Relationship to the Public School System

Table 5.18 gives the percentages of centers reporting use of various public school facilities. Outside of buildings, the major use is of personnel, especially teachers (46.4%), consultants (70.2%), and coordinators (42.9%). Eastern centers make greater use of offices, administrators and teachers, while southwestern centers make greater use of curriculum supervisors. In general, small town centers are more likely to use public school offices, administrators, consultants and teachers, while urban centers are more likely to use curriculum supervisors.

As was shown earlier, urban centers are more likely to be sponsored by public schools than small town or rural centers. Rural centers, on the other hand, are likely to have fewer public schools to depend on. Thus, as might be expected, small towns make greater use of outside public school resources, because they are not already affiliated with a public school and because more public schools are available for their use.

Negativism on the part of public schools toward the enrollment of Head Start pupils is shown in Table 5.19 by region. Only one center reported negativism more than sometimes and most centers usually report none. Northeast centers are the least likely to report any negativism.

Table 5.19

Negativism by Public School Toward Enrolling
Head Start Pupils by Region

	Region									
	NE		SE		SW		WT		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Very much	0	0.0	1	5.9	0	0.0	0	0.0	1	1.1
Considerable	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Sometimes	2	6.3	6	35.3	4	33.3	9	34.6	21	24.1
None	30	93.8	10	58.8	8	66.7	17	65.4	65	74.7

The proportion of centers reporting the use of various activities to prepare their children for public school is given in Table 5.20. The most frequent activities are training in academic readiness skills, child social skills and adult social skills, and field trips to kindergarten. The major variations are shown in Table 5.21. Rural and, to a certain

Table 5.20

PREPARATION FOR TRANSITION TO PUBLIC SCHOOL

PREPARATION	N	%
ACADEMIC READINESS SKILLS	38	45.2
ADULT SOCIAL SKILLS	27	32.1
CHILD SOCIAL SKILLS	26	31.0
HOME VISITS	6	7.1
ROLE PLAYING AT SCHOOL	3	3.6
FIELD TRIPS TO KINDERGARTEN	32	38.1
BUILD POSITIVE SELF IMAGE	0	0
ALREADY IN PUBLIC SCHOOL	2	2.4
SELF HELP, INDEPENDENCE	20	23.8
SENSORY MOTOR SKILLS	16	19.0
FOLLOWING RULES, DIRECTIONS	19	22.6
ATTENTION SPAN DEVELOPMENT	1	1.2
TESTING, REGISTRATION, FILE PREPARATION	7	8.3
MEDICAL, DENTAL SCREENING	7	8.3
GROUP ACTIVITIES	5	6.0
SAFETY RULES, PARENTS' NAMES	10	11.9
PERSONAL HABITS TRAINING	6	7.1
OTHER	6	7.1

Table 5.21

Preparation for Transition by Community Type

	Urban		Small Town		Rural	
	N	%	N	%	N	%
Academic Readiness	5	19.2	16	57.1	17	56.7
Adult Social Skills	4	15.4	8	28.6	15	50.0
Child Social Skills	5	19.2	7	25.0	14	46.7
Field Trips to Kindergarten	18	69.2	8	28.6	6	20.0
Following Rules/Directions	10	38.5	6	21.4	3	10.0

extent, small town centers are more likely to focus on the development of skills; urban centers tend to concentrate on familiarizing the child with public schools and their procedures.

5.2.2.6 Curriculum Orientations

Finally, the centers ranked seven program curriculum orientations which would assess the emphasis which they give in their classrooms. A similar question was asked, also, of full year Head Start Centers in a study conducted by the U. S. Census Bureau in 1970. The rankings are presented below for comparison purposes.

Table 5.22

RANKS ON CURRICULUM EMPHASES OF CENTERS,
CURRENT STUDY AND CENSUS BUREAU SURVEY 1970

	Current Study	Census Study 1970
Self-Esteem Development	1	1
Group and Social Skills	2	2
Motivational Development	3	6
Language Development	4	3
Sensory-Motor Development	5	4
Concept Development	6	5
Academic Skill Development	7	7

The rankings are quite similar except for the orientation of Motivational Development which moved from a sixth place ranking in 1970 to a third place ranking in 1977. These rankings indicate that, in general, the orientation of centers has not changed substantially; Academic Skill Development is lowest in terms of emphasis in the center operations, and Self-Esteem Development and Group and Social Skills Development remain the major emphases.

The centers were partitioned by identifying the orientations with the two highest rankings, i.e., 1 and 2, and assigning the center to the group which also ranked these 1 and 2. The groupings and the means of the individual orientation variables are given in Table 5.23. Group "0" was a catchall category and contained centers which could not otherwise be classified. These have high average ratings (1 = high) on Academic Skills and Language Development and represent a small academically oriented group.

For the remainder of the groups, Self-Esteem was always rated first or second and Concept Development and Academic Skills always rated at the low end. These groups are distinguished by the orientation they endorse in addition to Self-Esteem. Thus, group 2 endorses Social Skill Development in addition to Self-Esteem. The other groupings are: Group 3 Motivation; Group 4 Language Development; and Group 5 Sensory-Motor Skills.

Table 5.23

Means of Orientation Variables by Clusters

	Group					
Orientation	0	2	3	4	5	Overall
N =	4	41	22	16	16	99
Self-Esteem	5.50	1.24	1.05	2.12	1.75	1.60
Social Skills	3.25	1.76	3.23	3.44	3.56	2.71
Motivation	4.75	4.02	1.95	4.44	3.81	3.63
Language Development	2.25	4.27	4.50	1.62	4.69	3.88
Sensory-Motor Skills	5.50	4.12	4.91	4.50	1.56	4.00
Concept Development	4.25	5.83	5.45	5.12	6.00	5.60
Academic Skills	2.50	6.76	6.91	6.75	6.62	6.60

Thus, the table shows that few centers rank Academic Skills as having a major emphasis in their activities. There is some variation in emphases among the remaining centers, but this variation is very slight.

5.3 SUMMARY

Generally, the centers have small programs, with around three classes. The staffing is in keeping with this; there usually being enough teaching staff to keep class sizes less than twenty. Staff training usually consists of in-service training with a few centers offering outside classes.

Services and resources generally follow the guidelines and were available in substantial amounts. There was little variation among centers except as might be related to the greater ability to provide services, as in urban areas, or to environmental limitations on kinds of activities, as in the southwest.

Parent reinforcement of program objectives was moderately high, as was parent participation. It seemed that participation in actual classroom activities was related to parent support of program objectives, although the direction of the influence was not clear.

Although few centers were under the auspices of public schools, many made use of public school resources, especially personnel like teachers and consultants. Analyses indicate that small towns make more use of public school facilities, possibly because fewer of them are already connected to a public school and because public schools are available. Many more urban centers are already associated with public schools and need no extra contact, and rural centers may just not have many public school facilities readily available.

Finally, with regard to the preparation of children for transition into public schools, centers emphasized the development of academic skills, child social skills and adult social skills. There was also a tendency to try to familiarize children with public schools by providing field trips to kindergarten classrooms.

APPENDIX A.5

Table A5.1

MEAN AGES OF CENTERS BY REGION AND COMMUNITY TYPE

Region / Community Type		Northeast	Southeast	Southwest	West	Total
Urban	$\bar{X}$	10.717	8.667	8.875	6.940	8.610
	N	10	3	8	14	35
	SD	0.427	4.619	1.642	3.644	3.067
Small Town	$\bar{X}$	7.125	3.764	0	8.500	5.881
	N	12	12	0	4	28
	SD	2.886	3.029	0	3.448	3.485
Rural	$\bar{X}$	10.109	3.972	10.521	8.361	8.505
	N	13	6	4	12	35
	SD	2.191	1.724	0.602	2.805	3.131
Total	$\bar{X}$	9.260	4.524	9.424	7.717	7.793
	N	35	21	12	30	98
	SD	2.635	3.307	1.572	3.273	3.405

Table A5.2

MEAN NUMBERS OF CLASSROOMS PER CENTER BY REGION AND COMMUNITY TYPE

Region Community Type		Northeast	Southeast	Southwest	West	Total
Urban	$\bar{X}$	2.800	1.667	5.750	2.571	3.286
	N	10	3	8	14	35
	SD	1.317	0.577	9.513	1.869	4.731
Small Town	$\bar{X}$	1.500	5.231	0	3.250	3.414
	N	12	13	0	4	29
	SD	0.674	4.952	0	1.893	3.766
Rural	$\bar{X}$	2.231	3.667	2.000	1.167	2.086
	N	13	6	4	12	35
	SD	1.235	1.751	0.816	0.389	1.358
Total	$\bar{X}$	2.143	4.318	4.500	2.100	2.899
	N	35	22	12	30	99
	SD	1.192	4.052	7.822	1.626	3.581

Table A5.3

MEAN SIZES OF CLASSES BY REGION AND COMMUNITY TYPE

Region Community Type		Northeast	Southeast	Southwest	West	Total
Urban	$\bar{X}$	16.292	17.010	19.035	16.586	17.201
	N	6	3	8	14	31
	SD	1.470	0	1.168	2.146	1.979
Small Town	$\bar{X}$	16.167	19.799	0	15.000	17.557
	N	12	12	0	4	28
	SD	5.180	9.648	0	0	7.274
Rural	$\bar{X}$	15.244	19.028	17.625	15.167	16.138
	N	13	6	4	12	35
	SD	2.296	1.529	2.358	2.250	2.589
Total	$\bar{X}$	15.804	19.179	18.565	15.807	16.911
	N	31	21	12	30	94
	SD	3.542	7.261	1.693	2.130	4.411

Table A 5.4

AUSPICES BY REGION AND BY COMMUNITY TYPE

AUSPICES	Overall		REGION Northeast		Southeast		Southwest		West		COMMUNITY TYPE Urban		Small Town		Rural	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
LOCAL CAA	64	64.6	28	80.0	6	27.3	10	83.3	20	66.7	16	45.7	18	62.1	30	85.7
NON PROFIT	11	11.1	3	8.6	1	4.5	0	0	7	23.3	8	22.9	3	10.3	0	0
PUBLIC SCHOOL	10	10.1	2	5.7	3	13.6	2	16.7	3	10.0	10	28.6	0	0	0	0
NON-SPECIFIED	8	8.1	0	0	8	36.4	0	0	0	0	0	0	8	27.6	0	0
COLLEGE	4	4.0	0	0	4	18.2	0	0	0	0	0	0	0	0	4	11.4
RELIGIOUS ORG.	2	2.0	5.7		0	0	0	0	0	0	1	2.9	0	0	1	2.9
TOTALS	99		35		22		12		30		35		29		35	

Table A5.5

CENTERS LOCATED IN NEIGHBORHOOD OF CHILDREN SERVED

	Northeast	Southeast	Southwest	West	Urban	Small Town	Rural
N	27	19	10	15	29	17	25
%	81.8	90.5	100.0	62.5	87.9	63.0	89.

Table A 5.6

CITY SIZE BY REGION

CITY SIZE	Overall		Northeast		Southeast		Southwest		West	
	N	%	N	%	N	%	N	%	N	%
Over 100,000	13	13.7	3	9.4	0	0	1	8.3	9	30.0
25,000 to 100,000	25	26.3	13	40.6	6	28.6	0	0	6	20.0
Suburbs	6	6.3	5	15.6	1	4.8	0	0	0	0
2,500 to 25,000	36	37.9	9	28.1	13	61.9	8	66.7	6	20.0
Farm or Open Country	15	15.8	2	6.3	1	4.8	3	25.0	9	30.0
TOTALS	95		32		21		12		30	

Table A 5.7

ADMISSION CRITERIA BY REGION AND BY COMMUNITY TYPE

			REGION								COMMUNITY TYPE					
CRITERIA	Overall		Northeast		Southeast		Southwest		West		Urban		Small Town		Rural	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
INCOME	89	98.9	34	97.1	19	100.0	11	100.0	25	100.0	30	96.8	26	100.0	33	100.0
HANDICAPS	54	60.0	16	45.7	7	36.8	9	81.8	22	88.0	20	64.5	9	34.6	25	75.8
AGE	53	58.9	17	48.6	11	57.9	5	45.5	20	80.0	18	58.1	14	53.8	21	63.6
BIRTH CERTIFICATE	17	18.9	1	2.9	6	31.6	6	54.5	4	16.0	10	32.3	6	23.1	1	3.0
MEDICAL HISTORY	21	23.3	5	14.3	6	31.6	6	54.5	4	16.0	13	41.9	6	23.1	2	6.1
RESIDENCE	14	15.6	6	17.1	0	0	0	0	8	32.0	6	19.4	4	15.4	4	12.1
INTERVIEW	5	5.6	1	2.9	0	0	0	0	4	16.0	4	12.9	0	0	1	3.0
TB TEST (PARENT)	4	4.4	0	0	0	0	0	0	4	16.0	12.9		0	0	0	0
TRANSPORTATION	1	1.1	1	2.9	0	0	0	0	0	0	0	0	0	0	1	3.0
OTHER	1	1.1	1	2.9	0	0	0	0	0	0	1	3.2	0	0	0	0

Table A 5.8

AVAILABILITY OF LIBRARY FACILITIES

	N	%
BOOKS		
In Class	98	99.0
Centrally During Day	57	57.6
To Take Home	40	40.4
MATERIALS OTHER THAN BOOKS	18	18.2
OTHER	34	35.4

Table A 5.9

FIELD TRIPS AND SPECIAL EVENTS

	N	%
EXPOSURE TO AREAS, CULTURAL GROUPS	51	51.5
PARKS AND WOODLANDS	97	98.0
MUSEUMS	55	55.6
LIBRARIES	96	97.0
FARMS	86	86.9
INDUSTRIES	53	53.5
ZOOS	73	73.7
SEASHORE, WATERFRONT, LAKEFRONT	50	50.5
CHILDREN'S PLAYS	46	46.5
POST OFFICE, FIRE, POLICE, ETC.	93	93.9
VISITS BY COMMUNITY WORKERS	89	89.9
VISITS BY NEIGHBORHOOD TRADESMEN	62	64.6
OTHER	30	31.3

Table A 5.10

A COMPARISON BETWEEN THE NATIONAL DISTRIBUTION OF HEAD START CENTERS AND THE NATIONAL DISTRIBUTION* OF THE TOTAL U.S. AND THE POVERTY-LEVEL POPULATIONS (IN PERCENTAGES)

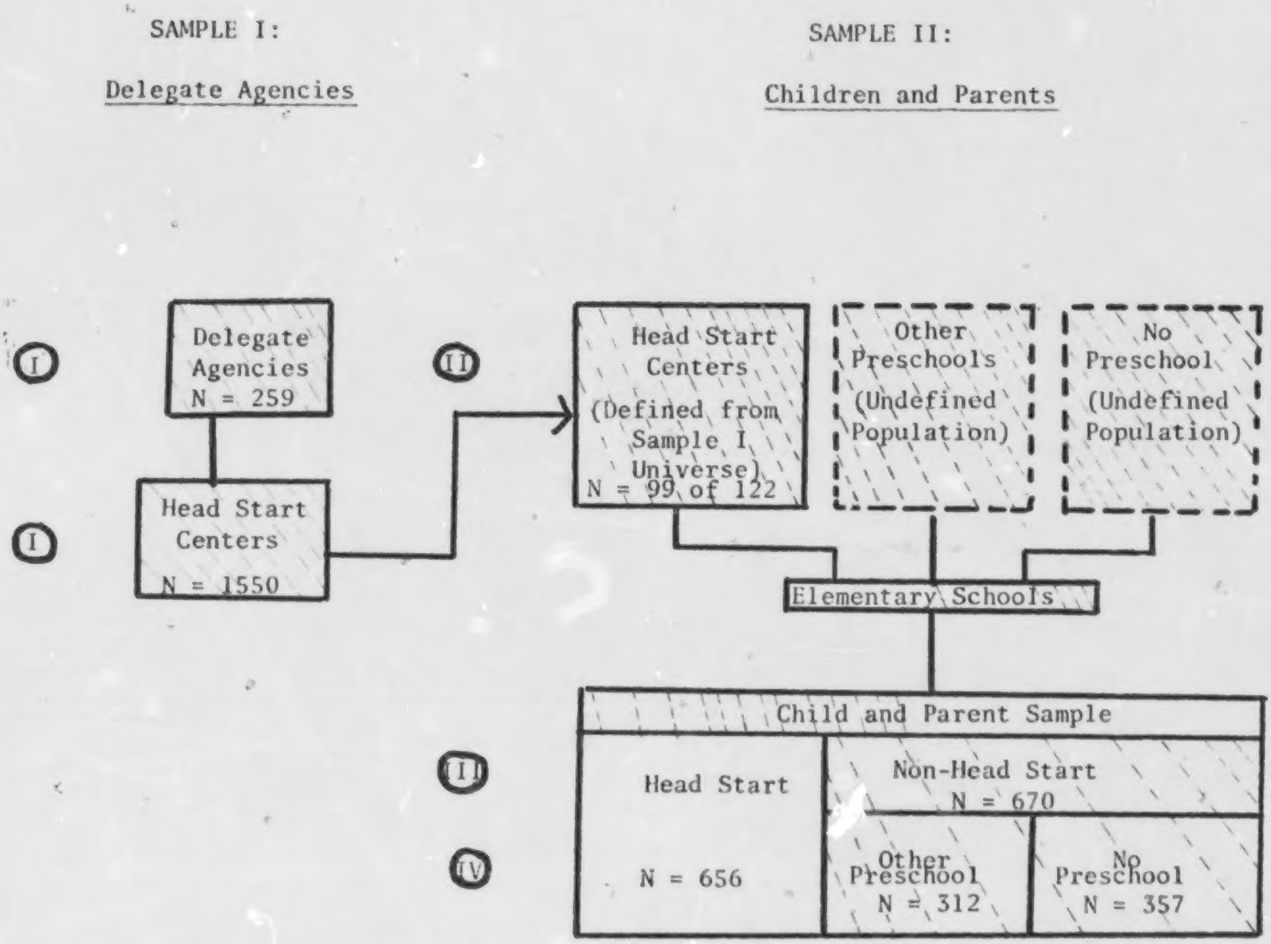
	GEOGRAPHIC REGION				TOTALS		
	Northeast	Southeast	Southwest	West	Head Start Centers	Total U.S. Pop.	U.S. Poverty Pop.
CITY SIZE							
Urban More than 50,000	25.5	2.5	5.9	10.2	44.1	35.9	47.5
Small Town 10,000-50,000	6.2	7.5	5.3	3.2	22.3	19.3	8.9
Rural Less than 10,000	7.8	11.1	7.0	7.6	33.6	44.8	43.6
TOTALS							
Head Start Centers	39.5	21.2	18.2	21.1	100**		
Total U.S. Population	49.9	15.8	10.0	24.3		100	
U.S. Poverty Population	38.3	25.1	15.5	21.1			100

* 1970 U.S. Census Data

** Head Start Center n = 1550

SECTION III

In this section, Chapter Six presents the perceptions of Head Start by the parents of the sampled children (N=656) and their perceptions of the benefits derived for themselves and their children.


SAMPLE I:
Delegate Agencies
SAMPLE II:
Children and Parents
I
Delegate Agencies N = 259
I
Head Start Centers N = 1550
II
Head Start Centers (Defined from Sample I Universe) N = 99 of 122
Other Preschools (Undefined Population)
No Preschool (Undefined Population)
Elementary Schools
Child and Parent Sample
III
Head Start N = 656
Non-Head Start N = 670
IV
Other Preschool N = 312
No Preschool N = 357

INSTRUMENT SET
I. Delegate Agency Survey
II. Head Start Center Questionnaire
III. Parent Interview
IV. Child Test Battery

CHAPTER SIX

PARENTS' REPORTS OF HEAD START

6.0 INTRODUCTION

The overall goal of the Head Start program is to foster social competence and optimal functioning in the children of low income families. The performance standards mandate that Head Start should be a comprehensive, interdisciplinary program which should involve families as well as children.

This section presents a description of Head Start families in the study and outcomes for these families, and reports on the responses of parents to questions about the Head Start program and its benefits. The parent interview includes items which elicit parents' reports on aspects of their own and their child's experience with Head Start and their evaluations of the experience. In addition, the parent interview sought current information about parent-child interaction patterns, educational resources in the home, and parents' perceptions of their children's current school adjustment, satisfaction and parents' attitudes about the educational process and their expectations for their childrens' future educational success.

6.1 THE PARENT INTERVIEW INSTRUMENT

The parent interview instrument for this study was designed to obtain information about the socio-economic background of the children participating in the study, about Head Start's impact on parents and children in areas mandated by the Performance Standards, and about parental attitudes and interactions with the child which may potentially mediate the child's social competence characteristics. A table of the parent interview items, organized into the following areas, is included in the Appendix:

- Characteristics of the sample
- Amount and kind of Head Start experience
- Health and Nutrition
    - Medical/Dental visits
    - Immunizations
    - Nutrition
    - Head Start assistance in obtaining medical/dental care

- Provision of social services
- Parent involvement in center activities
- Report of Head Start's impact on the child
- Satisfaction with Head Start
- Long-term effects of Head Start on parents

    Parent involvement with school
    Educational climate of the home
    Learning materials/resources in the home
    Verbal exposure of and interaction with the child
    Satisfaction with child's schooling
    Attitudes toward education and the schools

The following section discusses the parents' reports in these areas. Specific item distributions of responses for the Head Start sample and the no preschool sample are included in a separate table of the Appendix.

6.2 CHARACTERISTICS OF THE PARENT INTERVIEW SAMPLE

The sample includes 656 respondents of whom 92.6% are the children's mothers; the remaining respondents included fathers (2.5%), other relatives (4.8%), and siblings (.2%). Blacks and Whites are the largest ethnic groups represented, constituting 46.2% and 36.9% of the sample respectively. The remainder of the sample included 9.6% Hispanic Americans and 7.3% other ethnic groups (e.g., Native Americans and Asians).

6.2.1 Family Size and Composition

The average size of Head Start families in the study is 5.6 members with a range of two to fifteen members.

Table 6.1

FAMILY SIZE DISTRIBUTION OF THE PARENT SAMPLE

Persons in Household	Adjusted Percent	Cumulative Percent
2	4	4
3	13	17
4	22	39
5	21	60
6	15	75
7	9	84
8	36	90
9 or more	10	100

Approximately 29.4% of the families were single parent families, 52% two parent or two adult families, and 18.6% of the families had more than two adults living in the home.

6.2.2 Education

The average number of years of education completed by mothers is 10.9. The range for this distribution extends from three years education to graduate school attendance. The respondents' median and modal years of education were slightly higher, 11.58 and 12 years respectively. Table 6.2 presents the highest educational level attained by mothers and shows that nearly half (43.6%) of the mothers (respondents) were high school graduates; the next largest group of parents attended but did not graduate from high school (31.3%). A smaller percentage of the respondents received some education after high school, either attending college (7.9%) or some other kind of non-college post-secondary training (2.0%).

Table 6.2

LEVELS OF MOTHER'S EDUCATION FOR THE PARENT SAMPLE

Grade Level Completed	Percent	N
Grades 1-8	15.2	57
Attended High School but didn't graduate	31.3	199
High School graduates	43.6	278
Some College or Other Post-Secondary Education	8.8	56
College Graduate or higher	1.1	7

The father's educational attainment was not directly assessed in this study. However, the educational attainment of the primary wage earner in the home was assessed. Fathers were named as primary wage earners by 77% of the respondents. Examination of the distributions for educational attainment of primary wage earners indicates that this distribution is virtually the same as that for mothers, e.g., a mean education level of 10.2 years, a median of 11.27 years and a mode of 12 years.

6.2.3 Employment

Forty-two percent of the respondents reported that they are homemakers, 40.3% had jobs, and 17.6% reported that they were unemployed. Of those who were employed, 8.6% were employed occasionally on a part time basis, 21.9% were employed part time on a regular basis, and 69.5% held full time jobs. As Table 6.3 indicates, the majority of the respondents held either semi-skilled or unskilled positions, while substantially smaller percentages of the respondents were skilled workers or held clerical, or administrative positions. The distribution of occupations held by primary wage earners, also found in Table 6.3, is similar to that for respondents with most primary wage earners holding semi-skilled and unskilled jobs. However, a larger percentage of primary wage earners are skilled workers, probably reflecting the higher proportion of males who are primary wage earners.

Nearly two-thirds (66.5%) of the respondents reported that another member of the household received an income that was used to support the family, although 5.4% of the other wage earners were unemployed.

Fathers or stepfathers comprise the largest group of other wage earners and were named as the primary wage earners in the questionnaire by 77% of the respondents. Mothers were named as primary wage earners by 11% of the respondents followed by siblings (6%) other relatives (8.7%) and unnamed others (2.6%). Eighty-six percent of the primary wage earners held full time jobs. Another 9.8% of the primary wage earners held either occasional or part time jobs.

6.2.4 Income

The mean household income from all sources for the Head Start sample ranges from about $2,000 annually to about $15,000 annually. The sample mean is $6,354 with a standard deviation of $3,747. Since the employment status of the adults in the family has much to do with income, the mean income values for various employment categories are listed in Table 6.4. Clearly, the families with the lowest income are single parent, unemployed families; while the highest income group are two parent households where both parents are employed. Additional adults in the household on the whole tend not to contribute additional income.

Table 6.3

JOB CLASSIFICATIONS OF RESPONDENTS AND PRIMARY WAGE EARNERS

	Respondents (Mothers)		Primary Wage Earner[1]	
Classification	n	Percent	n	Percent
Executive/proprietor of large concern/professional	3	0.9	1	0.3
Manager or proprietor of medium sized business, lesser professional	14	4.0	9	2.4
Administrative personnel of large concerns/proprietor of small independent business semi-professional, e.g., clothing, shop owner, florist	8	2.3	18	4.8
Clerical, technical assistant	34	9.7	6	1.6
Skilled worker, e.g., baker, fireman, policeman, painter, construction foreman, etc.	8	2.3	74	19.7
Semi-skilled workers, e.g., truck or equipment operator, nurse's aide, practical nurse, hairdresser, housekeeper, enlisted military, etc.	130	37.0	127	33.8
Unskilled workers, e.g., laundry worker, farm hand, garbage collector, construction laborer, waitress)	122	34.8	106	28.2
Retired or pension pay	32	9.1	15	4.0
Welfare	--	--	20	5.3
TOTAL	351	100.1	376	100.1

[1] Includes mothers who are primarily wage earners.

Table 6.4

DISTRIBUTION OF TOTAL HOUSEHOLD INCOME FOR HEAD START FAMILIES ACROSS CATEGORIES OF EMPLOYMENT

Employment Status of Adults		Mean Income
Single, No Work	$	3,465
	N	113
	S.D.	1,499
Single, Working	$	4,770
	N	35
	S.D.	2,578
2 Adults, No Work	$	5,534
	N	34
	S.D.	3,192
2 Adults, 1 Work	$	6,662
	N	146
	S.D.	3,530
2 Adults, 2 Work	$	8,592
	N	128
	S.D.	3,788
More than 2 Adults	$	7,204
	N	92
	S.D.	4,008
COLUMN TOTAL	$	6,354
	N	548*
	S.D.	3,747

*Note: Number of missing data points = 108.

6.2.5 Region and City Size

The data in Table 6.5 indicate the distribution of the parent sample across the 12 cells used in the stratification of the sample plan. The largest portion of the sample came from the northeast and southeast regions, with the least from the southwest. In the current sample, the southeast region is composed of about 85% Blacks. This group represents about 60% of the Blacks in the entire sample. Nationally, the largest concentration of Head Start programs (about 25%) is in the southeast region. Each city size category is well represented in the sample with about 40% of the parents coming from smaller towns and about 25% coming from cities over 50,000 population.

Table 6.5

DISTRIBUTION OF HEAD START PARENT SAMPLE
ACROSS GEOGRAPHIC REGION AND CITY SIZE CATEGORIES

REGION	CITY SIZE			
	10,000 or Fewer	10,001 to 49,999	50,000 or Greater	ROW TOTAL
Northeast	84 41.2% 32.6% 12.8%	74 36.3 32.5 11.3	46 22.5 27.1 7.0	204 31.1
Southeast	62 28.8 24.0 9.5	117 54.4 51.3 17.8	36 16.7 21.2 5.5	215 32.8
Southwest	38 36.5 14.7 5.8	13 12.5 5.7 2.0	53 51.0 31.2 8.1	104 15.9
West	74 55.6 28.7 11.3	24 18.0 10.5 3.7	35 26.3 20.6 5.3	133 20.3
COLUMN N TOTAL %	258 39.3	228 34.8	170 25.9	656 100.0

NOTE: Cell Key: Count
Row Percentage
Column Percentage
Total Percentage

6.3 PARENTS' REPORTS OF SERVICES AND BENEFITS OFFERED BY HEAD START

6.3.1 Health and Nutrition

The Head Start performance standards require delivery of services to children, parent education and parent involvement in areas of medical and dental care, mental health and nutrition. The standards also require health and nutrition to be included as part of the Head Start curriculum for children so they can acquire habits and knowledge that will lead to proper health care and maintenance in the future. Although there is not a one-to-one correspondence between questions about health care, the performance, the questions in the parent interview provide a general overview of the role of Head Start in influencing children's health care, parent education and participation in these areas.

- Medical and Dental Services

Among the most specific services mandated by the performance standards is that Head Start programs make arrangements for medical and dental care and help pay for such services. About 80% of the respondents reported that Head Start had made arrangements for their child to receive medical care. Eighty-eight percent of those who said Head Start made arrangements for medical care reported that Head Start also helped to pay for these services. Eighty percent of the respondents reported that Head Start had made arrangements for dental care, and 90% of these respondents reported that Head Start had helped to pay for these services.

As a rough indication of the children's current health status, we also assessed how recently the children had visited doctors and dentists, and whether they had received inoculations against common childhood diseases. The respondents indicated that virtually all of the children have been immunized against DPT (99.2%), polio (99.1%), and measles (98.6%). The Head Start graduates also appear to have received recent medical and dental care.

The average Head Start graduate had visited a physician at least once during the six month period prior to the time of the interviews which took place during the first months of the school year. The median and modal numbers of months since the children's last visit to a physician was 3.8 months and one month respectively. A little more than half of the children had made their last visit to the doctor for a check-up (53.1%), and the remainder went because something was wrong.

The average Head Start graduate had visited a dentist at least once during the last eight months; the median and modal numbers of months since the children's last visits to a dentist were 8.00 and 6.33 respectively. The majority of the children saw dentists for checkups (75%) and the remainder (25%) because of a problem.

Finally, parents perceived that Head Start had been helpful to them and their children in areas of health and nutrition. Eighty-one percent of the respondents reported that Head Start had helped their children a great deal in learning basic nutrition (e.g., the kinds of foods that are good for him or her), and hygiene practices such as the importance of brushing teeth and washing hands). The majority of the respondents felt that Head Start had helped "some" (29%) or "a great deal" (54.5%) to make them aware of the importance of providing nutritious meals. Only 16% felt that Head Start had not helped them at all.

6.3.2 Social Services

The performance standards specify a broad range of social service goals for Head Start. The social services provisions overlap to some extent with the other three program components in that they call for health related services, education, and parent involvement. The entire Head Start program is a social service program. The description of the social services component in the performance standards is quite general and calls for systematic recruitment and enrollment of eligible children. The questions asked of parents in this transition study did not, for the most part, deal with Head Start social services components, except for instances where requirements under the social services component are redundant with other components, e.g., education, health, and parent involvement. However, parents were asked whether Head Start had helped them find jobs and whether Head Start had helped them acquire further education. Our results indicate that very few parents were aided by Head Start in these two areas. Only about 8% of the 647 parents responding reported that Head Start had helped them find a job, and only 9% reported that Head Start had helped them get further education.

6.3.3. Parent Involvement and Parent Education

The overall Head Start program goals and the specific goals listed under the parent involvement and parent education components of the performance standards call for involving parents in the educational process, and for creating an environment in the home as well as the classroom which will facilitate the children's intellectual and socio-emotional development. The performance standards call for educating parents about child development, and instructing them about ways in which they can interact with their children at home. The parent interview administered in the transition study includes a number of questions which ask for parents' reports about their participation in Head Start activities, their interaction patterns with their children, and their assessments of their children's abilities and their expectations for the children's future educational attainment. The parent interview also included items which elicited parents' reports about areas in which Head Start has helped their children, and ways that Head Start has helped them to participate in their children's education and develop parenting skills, and finally, parents were asked to report on their overall satisfaction with Head Start.

• Parent Involvement in Center Activities

The parent involvement component of Head Start requires both that center staff visit parents' homes, and that parents are encouraged to visit centers and participate in activities there including meeting with teachers and other parents, and becoming involved in classroom activities. Parents were also asked about the frequency and purpose of staff visits to their homes and about their visits to the centers.

About 94% of the parents reported that the Head Start centers had provided opportunities for them to get together with other parents. Fifty-seven percent of the parents reported that centers provided these opportunities about twice a month, and an additional 24% reported that these activities were held once a month. Much smaller proportions of the respondents reported that activities were held as seldom as once every two months (7.1%) or as often as once a week (9.7%). The majority of the parents reported that they attended these activities all or most of the time (51%), and 5.2% of the parents reported that they never attended these activities. The remaining parents reported that they attended about half the time (19.3%) or less (24.5%).

About two-thirds of the parents reported that they had spent time in the Head Start center helping in the classroom or providing transportation for field trips or other things. Parents' reports of how often they helped in the classroom ranged from less than four times per year, reported by 13% of those who had helped at all, to once a week reported by 28% of the respondents. About a quarter of the respondents reported helping at least twice a month.

In general, the Head Start parents report quite a bit of interaction with Head Start when visits to centers to meet with other parents, visits to teachers, and helping in the classroom are considered.

• Center Visits to Parents

Over 80% of the respondents reported that they had been visited by center staff. The average respondent reported visits by center staff at least twice a year and substantial proportions of the respondents reported more frequent visits, e.g., about 20% of the respondents reported visits four times a year and 23% reported visits once a month. Only 17.2% of the respondents who had been visited at all reported visits as infrequently as once a year.

The most common reason for center staff visits reported by 62.3% of the respondents was to discuss the child's progress in school. Smaller percentages of the respondents reported that such visits were social (20.3%) or that their purpose was to discuss family problems (.3%), health (5.6%) or for some other unnamed purpose (11.5%).

• Parents' Perceptions of Head Start Benefits for Their Children

The parent interview assessed parents' perceptions and ratings of benefits Head Start provided for their children in several areas, including reading, arithmetic, cultural and community awareness, liking school work, self confidence and social skills, learning how to think and the importance of common health and hygiene practices. Table 6.6 presents the areas ranked by parents and the distributions of their rankings.

As the percentages in Table 6.6 suggest, the majority of the respondents felt that participation had been highly beneficial to their children in areas of social and personal adjustment to school. Two thirds or more of the parents felt that Head Start had helped their children a great deal to feel sure of themselves, to get along with others, to like doing school work, and to know the importance of basic hygiene practices such as brushing teeth, washing hands and recognizing kinds of foods that are good for them.

Table 6.6

Parents' Reports of Head Start Impact on the Child's Educational and Social Development

Areas in Which Head Start Helped Child	Percent None	 Some	 A Great Deal
• Head Start helped child feel sure of self.	3.7	28.9	67.3
• Head Start helped child get along with others.	3.1	23.8	73.1
• Head Start helped child like to do school work.	7.5	25.3	67.2
• Head Start helped to teach child how to think.	3.9	37.1	58.9
• Head Start taught child to read.	40.1	34.9	25.0
• Head Start helped teach child numbers and arithmetic.	11.9	46.9	41.2
• Head Start taught about community through field trips and other activities	4.9	30.6	64.5
• Head Start helped child become more appreciative of cultural background.	22.3	41.9	35.8
• Head Start helped child know the importance of brushing teeth, washing hands and the kinds of foods that are good for him/her.	2.0	16.8	81.2

Although a relatively large proportion of the respondents felt that Head Start had helped a great deal to teach their children how to think, how to do arithmetic and about their communities, their endorsement of Head Start's helpfulness in these areas was less enthusiastic, as indicated by the large proportions of parents who thought Head Start was only somewhat helpful in these areas. Finally, substantial proportions of the parents felt that Head Start had not been particularly helpful in teaching their children how to read. Most likely, in the preschool years of Head Start, reading skills are not emphasized. The Head Start centers reported that academic skills have a lower priority than affective areas (See Chapter 5), and the areas of benefit reported above by parents seem to correspond with these priorities.

- **Parents Perceptions of Head Start Impact in Parent Education and Parent Involvement**

The parent interview assessed parents' perceptions of Head Start's impact or helpfulness in areas of parent education and parent involvement. Specific areas of parent education assessed included helping parents obtain a better understanding of children's development and learning processes, helping them become more adept at helping their children with homework, and making them aware of the importance of providing nutritious meals. The two specific areas of parent involvement parents were asked to rate included helping parents to get involved with center activities and helping them get to know the child's current teacher.

Parents' ratings are presented in Table 6.7 and their responses indicate that on the whole they felt that Head Start had helped them understand what their children were doing in school and how children learn. Nearly two-thirds of the respondents thought Head Start had been extremely helpful in both of these areas and the majority of the remaining parents

Table 6.7

PARENTS' REPORTS OF AREAS OF BENEFIT TO PARENTS' UNDERSTANDING OF CHILD'S EDUCATION

	No	Yes Some	A Great Deal
• Head Start helped parent understand what child is doing in school.	8.6	28.5	63.0
• Head Start helped parent get to know child's teacher this year.	36.7	28.5	34.7
• Head Start helped parent help child with homework.	17.6	34.2	48.2
• Head Start helped parent understand how children learn.	7.0	27.1	65.9
• Head Start helped parent become involved in school's activities.	19.6	34.2	46.2
• Head Start made parent more aware of importance of providing nutritious meals for children.	16.8	28.7	54.5

felt that Head Start had been of at least some help. The majority of the parents also felt that Head Start had been some or a great deal of help to them by making them better able to help their children with school work at home.

The overwhelming majority of the parents felt that Head Start had helped them become involved in the center's activities; however, a sizeable minority felt that Head Start had not helped them become involved in center activities.

Educating parents about the importance of providing nutritious meals for children was an important Head Start goal and as Table 6.7 indicates over 83% of the parents felt that Head Start had helped some or a great deal to make them aware of the importance of nutritious meals.

Finally, in order to assess whether Head Start had attempted to aid parents in the transition from Head Start to public school, respondents were asked whether Head Start had helped them get to know the child's current teacher. Sixty-three percent of the respondents felt that Head Start had helped them some or a great deal, but nearly 40% of the parents felt that Head Start had not helped them get to know the current year's teacher.

In summary, the parents' reports indicate that Head Start had been generally helpful to parents in performance standards areas that involved educating parents about children's learning and developmental processes, what children were doing in school and the importance of providing nutritious meals. Although the majority of the parents also felt that Head Start had helped them become involved in center activities and get to know the child's current teacher, their endorsements of Head Start's helpfulness in these two areas was less enthusiastic than in the parent education areas, and sizeable proportions of the respondents felt that Head Start had not helped at all in these two areas.

- Parent Satisfaction with Head Start

The parents' level of satisfaction with Head Start is both an outcome of the experience and a mediator of parents' other attitudes about Head Start and the benefits they perceived. Among variables which serve as indicators of parents' satisfaction with the program are

- Parents' willingness to send younger children to Head Start
- Parents' general ratings of Head Start's helpfulness to the child
- Parents' ratings of Head Start's helpfulness to parents and families

Over 97% of the parents reported that they would send younger children to Head Start, if they had the chance. Parents overwhelmingly endorsed Head Start as being helpful to them personally (95%), and reported that Head Start was very or extremely helpful to their children (87.9%).

The Parent Interview provided parents with a chance to make comments about their reaction to the Head Start program. The comments given were reviewed and some of them are presented below in order to provide an indication of parents' reactions to the program. Since the parents overwhelmingly supported the program, most of the comments presented are positive; however, some comments which are negative in tone are also provided.

> "I think it's a good program, because it helps children when they get to kindergarten."
>
> "I feel that they (Head Start programs) are very helpful in showing them how to get along with other children."
>
> "There should be more programs for low income families to get more medical care."
>
> "Much more constructive program than five years ago."
>
> "Very beneficial to children who have both parents employed or one-parent families."
>
> "Good program to have. Teaches children numbers and letters."
>
> "Excellent -- helps the children and helps the parents who participate."
>
> "Head Start really helped James and the whole family. Would like younger child to go."
>
> "Thought it was better than kindergarten and the fact that it was held at the school he would attend in first grade was good."
>
> "Think it's good and helps them get a head-start. Have three that have gone and think they are doing better than the one that didn't."

> "More over-income children should be able to get into it."
>
> "Children are being pushed early. Socially it may help, but could be others should not have income barrier."
>
> "Basic skills should be taught so that children are ready for first grade -- less playing around, more discipline."
>
> "Parental involvement should be mandatory regardless of income. Program should be responsible for parental awareness of school activities. Program should provide program guidelines at time of registration to all parents."

6.3.4 Post-Head Start Parent Involvement, Educational Attitudes and Educational Environment in the Home

Head Start was designed to provide the foundation for continuing parental involvement in the educational process through their continued interaction with school staff when the child is in elementary school, and through creating a home environment which provides the child with stimulation and encouragement conducive to both learning and acquiring basic skills, and to the child's social and emotional development. A number of items in the transition study assessed parents' current attitudes about education, the kinds of things they do to help their children in elementary school, and the educational environment in the home. Parents' responses to some individual items are presented in the following sections along with their scores on composite educational attitude variables. These latter variables constitute potential mediators of children's scores on academic and social developmental variables. Item distributions are presented in the Appendix.

- Parent Involvement with the School

Over 80% of the Head Start parents reported that they had visited the school during the current school year to talk with the child's teacher. The average number of visits reported was 2.59, and the largest percentage of the parents (32.8%) reported that they decided to visit on their own. About equal proportions of the remaining parents were asked to come by the school or teacher (23.9%), decided together with the teacher (21.3%) or couldn't remember who initiated the visit (20.9%). Topics commonly discussed during parents' visits to the school are presented in Table 6.8 below.

Table 6.8

Topics Discussed During Parents' Visits to School

Reason	N	% Citing Reason
To discuss problems child may have had with school	255	38.9
To discuss what child is learning in school	447	68.1
To discuss child's behavior in school	358	54.6
To talk about child's books or the teaching materials	244	37.2
To discuss the teacher's method of teaching	173	26.4

As Table 6.8 indicates, the most commonly cited topics discussed when parents visited the school were what the child was learning in school and the child's behavior in school.

- Educational Climate in the Home

As indicated in Section 6.1, a number of items assessed the educational environment in the homes. Items asked about the presence of material resources such as books, toys and other materials available for the children to play with, and educational television. Questions also asked about parents' interactions and discussions with their children about school and school work. In addition, questions assessed parents' attitudes about education, their perceptions of their children's abilities and progress in school, and their expectations about the level of schooling the child will ultimately attain. Parents' reports about the educational climate are summarized in the section below. Item distributions are presented in the Appendix.

- Presence of Material Resources in Homes

Parents were asked to indicate whether children had a number of different kinds of materials and toys available in their homes. As Table 6.9 indicates, the Head Start children have a variety of materials available to play with, the most common being, crayons and paper, scissors and catalogs which are possessed by over three quarters of the children.

Table 6.9

LEARNING RESOURCES AND MATERIALS AVAILABLE IN HEAD START HOMES

Kind of Toys in the Home	Number and Percent of Children Possessing Toys	
	N	%
Crayons and paper	644	98.3
Scissors	491	75.2
Scotch tape, paste or stapler	489	74.9
Jigsaw Puzzle	434	66.5
Old picture catalogs or magazines to read and cut up	588	89.9
Paint or magic markers	430	65.8
Clay or playdough	367	56.7
"Put together" toys like tinker toys, legos, pegboards or beads for stringing	418	64.3
Hammer and nails with some wood scraps	273	41.6
Yarn, thread, and cloth scraps for knitting or sewing	354	54.2
Toys using milk cartons, tin cans, or egg cartons	374	57.0
Plants of his/her own in a pot or garden	240	36.6

- Educational Television

During the past several years a number of educational shows have been designed for children, and in particular, socially and economically disadvantaged children such as Head Start children. Among the shows specifically designed for disadvantaged children are Sesame Street, Electric Company and Ville Alegre. Table 6.10 below presents the proportions of children watching these shows and how frequently they watch.

Table 6.10

FREQUENCY OF WATCHING EDUCATIONAL TELEVISION SHOWS IN HEAD START HOMES

Television Show	Never	Seldom	Several Times a Week	Every Day
	%	%	%	%
Sesame Street	25.5	22.3	16.8	35.4
Electric Company	47.6	15.8	15.3	21.3
Mr. Rogers	65.4	12.9	9.5	12.2
Ville Alegre	88.4	6.7	2.5	2.3

The results in Table 6.10 indicate that the majority of the respondents report that their children watch Sesame Street at least some time and 52% watch several times a week or more; although much smaller percentages of the respondents reported that their children watched other educational shows. The Electric Company is programmed primarily for somewhat older children than this sample, and Ville Alegre is intended primarily for Spanish-speaking children, comprising about 9.6% of the current sample.

- Verbal Interaction and Exposure in the Home

Over half of the children have fifteen or more books, and an additional 30% have at least several books. Parents report that 63% of the children read or look at books every day, and 75% of the children are read to several times a week or more often.

The majority of the parents (86%) report that they and their children discuss school almost every day. The most commonly reported topic of these discussions was school work mentioned by 57% of the respondents. Getting along with other children, mentioned by 15% of the respondents, was the second most common topic of conversation.

About 40% of the parents reported that their children came for help on homework about once a month or less. This finding is not surprising considering that the children in the sample were enrolled in kindergarten or preschool Head Start programs and in which homework assignments are rare. An additional 54% of the sample reported discussing homework with children somewhat more often.

- Satisfaction with the Child's Schooling

The majority of the parents were satisfied with their child's schooling. About 70% rated their child's teacher as either very good or excellent. About 85% of the parents also reported that their children liked school very much (38.6%) or loved school (46.8%). Nearly two-thirds of the respondents (63.7%) were very satisfied with their children's progress and most of the remaining parents (30.9%) were more or less satisfied.

- Expectations for Child

Most of the parents (65%) felt that compared to other children their child's ability was about the same as that of other children their age. Most parents thought their children's school performance would be average (30%) or better (66.6%).

About half of the parents felt that their children would finish high school and the next largest group of parents (25%) thought their children would complete four years of college. The remaining parents were primarily distributed among those who felt their children would complete vocational training (7.2%), a two year college (6.4%), or graduate school (4.4%).

- Parents' Attitudes About Education

A set of items from the Hess Educational Attitudes Scale was selected to assess the parents' attitudes toward the schools and education in general. Attitudes such as these may not be directly affected by Head Start, but they provide an assessment of some of the more enduring aspects of the home learning climate. The data reported in Chapter Seven below suggest that some of these attitudes may be significant mediators of the child's social competence in the school setting. Initially, these items were included in the parent interview as potential covariates or predictors of the child's learning during the school year. However, since the current study examines only school entry scores, these items are reported here in part to characterize more fully the sample of Head Start parents, and in part to illustrate certain domains which merit further investigation in future studies. This section reports a factor analysis of these attitudinal items, as well as another set of items which characterize aspects of the parent-child interactions reported above. Differences in parents' responses to the factor scores are then examined through their regression on a set of demographic descriptors.

A principal components analysis, with varimax rotation, of the Hess items yielded the factors reported in Table 6.11. The items loading on Factor I suggest a measure of powerlessness and alienation with respect to the schools. The correlation of Factor I with Locus of Control is -.32 in the Head Start sample, indicating that parents scoring relatively higher on this factor tend to have a more external locus of control. We have interpreted Factor II as an indicator of the parents' motivational orientation.

Table 6.11

PRINCIPAL COMPONENTS ANALYSIS RESULTS FOR HESS EDUCATIONAL ATTITUDE SCALE ITEMS

Factor	Loading	Eigen Value	Percent of Variance
FACTOR I: School Dissatisfaction-Alienation		2.88	19.2
If I disagree with the principal, there is nothing or very little I can do.	0.63		
Most teachers do not want to be bothered by parents coming to see them.	0.58		
Parents can do very little to improve the schools.	0.69		
FACTOR II: Educational Need to Avoid Failure		1.42	9.5
The most important quality of people is their driving purpose to get ahead.	0.57		
A mother should do her best to avoid disappointments for her child.	0.58		
Most children have to be made to learn.	0.33		
In schools there should be more important things than getting good grades.	-0.69		
Kids cut up so much that the teachers can't teach.	0.34		
FACTOR III: Value of Education			9.5
People who don't have much education enjoy life just as much as well educated people.	-0.71		
The only way poor people can raise the way they live is to get a good education.	0.67		
FACTOR IV: School Dissatisfaction-Pupils			
Sports and games take up too much time at school.	0.54		
Kids cut up so much that teachers can't teach.	0.45		

Factor	Loading	Eigen Value	Percent of Variance
The law should be changed so that boys and girls would have to stay in school until they have completed high school.	0.77	1.07	7.1
TOTAL VARIANCE ACCOUNTED FOR BY THE FACTORS			43.4

While the items at first seem rather disparate, they suggest in part the desire for educational achievement. At the same time there is a sense of coercion in the character of the items, as well as the suggestion of avoiding disappointment. Classical motivation theory hypothesizes two aspects of motivation: the need for achievement, and the need to avoid failure. The items in Factor II appear more related to the need to avoid failure, at least with respect to the child's education. The items in Factor III seem to reflect the value the parents place on education. Factor IV expresses the parents' dissatisfaction with the school for reasons related to child behavior and activities.

Four factors emerged from the principal components analysis of the items assessing parent-child interactions and activities, as reported in Table 6.12. Factor I reflects exposure to reading materials in the home. Factor II suggests the parents' satisfaction with the child's schooling. Factor III indicates the level of educational expectations for the child, and the final factor suggests a measure of satisfaction with schooling wherein the child works on its own without the parents' help.

The relationship of these attitude and interaction factors to the parents' demographic status was examined in a regression analysis using the same set of background descriptors employed in the regression analyses of the child measures in Chapter Seven. See Section 7.3.1 for a detailed explanation of the regression procedures. The results of the regression analysis are reported in Table 6.13. As in the analysis of child measures, those factors for which the regression model accounted for a non-significant proportion of the variance have been deleted from the Table 6.13. In addition, only those standardized regression coefficients are reported which were significant at or beyond the .05 level of confidence.

Three of the Hess Attitude factors demonstrated significant associations with the set of demographic descriptors: School Dissatisfaction/ Alienation (18% of variance accounted for); Motivation to Avoid Failure (20% of variance accounted for); and School Dissatisfaction with Pupils (8% of variance accounted for). All of these attitudes demonstrated a negative relationship with level of mother's education. Non-graduates from high school reported higher levels of alienation and dissatisfaction, as well as a higher avoidance of failure motivation. Blacks and Hispanics tended to

Table 6.12

PRINCIPAL COMPONENTS ANALYSIS RESULTS FOR PARENT CHILD INTERACTION ITEMS

Factor	Loading	Eigen Value	Percent of Variance
FACTOR I: Verbal Interaction/Exposure			
Number of books in the home that the child can look at or read.	0.45		
How often child looks at books or read by him(her)self at home.	0.43		
How often someone reads stories to the child.	0.46	2.18	18.2
FACTOR II: Satisfaction with Child's Schooling			
How often do you and child talk about school?	0.33		
How good is child's teacher?	0.33		
How child feels about school.	0.46		
Satisfaction with child's progress in school.	0.46	1.37	11.4
FACTOR III: Expectations for Child			
How well child is expected to do in school.	0.47		
How far child is expected to go in school.	0.38		
Rating of child's ability compared to other children his/her age.	0.57	1.09	9.1
FACTOR IV: Independent Student			
How often child comes for help on homework.	-0.65		
Satisfaction with child's teacher.	0.42		
Number of books in home for child to look at or read.	0.36	1.07	8.9
TOTAL PERCENT OF VARIANCE ACCOUNTED FOR			47.6

Table 6.13

STANDARDIZED REGRESSION COEFFICIENTS FOR DEMOGRAPHIC DESCRIPTORS OF PARENT ATTITUDINAL FACTORS AND PARENT-CHILD INTERACTION FACTORS

	Hess Educational Attitudes Scale Factors			Parent-Child Interaction and Home Environment Factors		
	School Dissatisfaction--Alienation	Educational W_{AF}	School Dissatisfaction--Pupils	Parents' Locus of Control	Verbal Exposure	Expectations for Child
Region: Southeast vs. Other Areas	0.25					
Age						
Sex (1 = M, 0 = F)						
Missing Sex Data						
Mother's Education						
College vs. High School Incomplete	-0.12	-0.14			0.19	0.14
High School Graduate vs. High School Incomplete	-0.13	-0.15	-0.13	0.083	0.16	0.13
Family Composition						
Multiple Parent (1) vs. Single Parent (0)				-0.10	0.10	
Family Size						
Income						
Missing SES				-0.089		0.095
Child Ethnicity						
Hispanics vs. Others	0.14	0.15		-0.18		
Others vs. Blacks, Whites and Hispanics						
Blacks vs. Others		0.24	0.17			0.20
R	0.42	0.45	0.28	0.31	0.31	0.29
R^2	0.18	0.20	0.08	0.10	0.10	0.08

NOTE: Only coefficients significant at or beyond the 0.05 level are reported. N = 656.

have higher scores on these factors as well. Given these demographic associations with home attitudinal characteristics, it remains for future studies to determine how such attitudes interact with different teacher attitudes and classroom approaches in determining the child's social competence.

Two of the parent-child interaction factors as well as the locus of control score demonstrated significant associations with the demographic descriptors: Verbal Exposure to Reading (10% of variance accounted for); Educational Expectations for the Child (8% of variance accounted for); and 10% of the variance accounted for in the Locus of Control score. Once again, level of mother's education indicated significant associations with these factors. There was a tendency for non-graduates from high school to report lower scores on these three measures. Also, there was a slight tendency for more internal locus of control in parents to be associated with lower family size, and for verbal exposure to be associated with greater family size. In addition, Hispanics tend to be more external in their locus of control. One other ethnic descriptor was significant -- Blacks tend to report higher levels of educational expectation for their children than other ethnic types. As with the Hess Attitudinal factors, the potential interactions of home environments with school and classroom characteristics remains to be explored in future studies.

6.4 SUMMARY

The report of Head Start parents indicates that parents on the whole highly endorse the benefits and acitivities of Head Start for them and their children. Although the current study could not obtain detailed medical information, about 80% of the parents reported receiving medical and dental care for their children, and assistance in paying for these services. The Social Services area was covered very lightly by the parent interview of this study. The indications are, at least with respect to education and employment, that Head Start is not an active ingredient in assisting parents in these areas. The reports of involvement with and visits to and from the Head Start centers suggest that there is an active interchange of information and activities between Head Start centers and most parents. The parents overwhelmingly endorse Head Start as helpful to themselves, their children, and to potential younger siblings of their children.

In addition, this analysis suggests that among Head Start families, mothers who are less educated and have lower incomes also tend to express more alienation from school, a more external locus of control and a higher need or desire to avoid educational failure for their children. There is also a tendency for these types of parents to report fewer books in the home and fewer reading experiences with the child, as well as lower educational expectations for the child. What remains for future studies in Head Start is to determine whether and to what extent such parent attitudes become translated into lower levels of child social competence, and the extent to which amendments in aspects of the Head Start programs can more clearly assist the types of families who need it most.

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Respondent's Ethnicity						
Black	303	46.2	94	30.0	110	30.8
White	242	36.9	183	58.5	207	58.0
Hispanic	63	9.6	22	7.0	23	6.4
Other	48	7.3	14	4.5	17	4.8
Location of Residence						
Farm	167	25.5	35	11.2	105	29.4
Small City	268	40.9	136	43.5	141	39.5
Suburb of Medium City	20	3.0	10	3.2	12	3.4
Medium City	99	15.1	76	24.3	37	10.4
Suburb of Large City	9	1.4	3	1.0	10	2.8
Large City	69	10.5	43	13.7	38	10.6
Missing	24	3.7	10	3.2	14	3.9
Problems with Interview						
No	563	85.8	277	88.5	312	87.4
Yes	57	8.7	21	6.7	21	5.9
Missing	36	5.5	15	4.8	24	6.7
Understood Question 29*						
Poorly	55	8.4	15	4.8	22	6.2
Good	277	42.2	110	35.1	121	33.9
Very Good	292	44.5	172	55.0	203	56.9
Missing	32	4.9	16	5.1	11	3.1

*Now, I'd like to read some statements to you about schools and teachers. Some of the questions are to find out how you feel children should be brought up. I'd like you to tell me whether you agree or disagree with what I am saying.

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Understood Question 39**						
Poorly	35	5.3	9	2.9	18	5.0
Good	284	43.3	100	31.9	116	32.5
Very Good	298	45.4	188	60.1	211	59.1
Missing	39	5.9	16	5.1	12	3.4
Understood Overall Questionnaire						
Poorly	25	3.8	3	1.0	18	5.0
Good	298	45.4	101	32.3	115	32.2
Very Good	297	45.3	189	60.4	212	59.4
Missing	36	5.5	20	6.4	12	3.4
Relationship to Child						
Mother	602	91.8	294	93.9	328	91.9
Father	16	2.4	8	2.6	16	4.5
Sibling	1	0.2			2	.6
Other Relative	31	4.7	11	3.5	9	2.5
Missing	6	0.9			2	.6

**Here are some ideas that people have. There isn't a right or wrong answer. We just would like to have your opinion.

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Age (In Months)						
43-60	21	1	6	1	16	4
61-65	119	19	56	17	83	23
66-70	170	26	72	22	111	30
71-75	148	23	79	25	85	24
76-80	86	13	56	18	30	9
81-85	81	13	30	10	23	6
86-90	17	3	6	2	4	1
91-95	4	0	3	1	2	0
Missing	10	2	5	2	3	1
Months Since Last Visit to Doctor						
0	68	10	38	12	56	16
1-5	298	45	167	53	173	48
6-10	85	13	49	16	33	8
11-15	58	9	18	5	27	7
16-20	42	7	7	2	7	2
21-29	10	1	5	1	11	3
31-79	9	0	2	0	8	0
Missing	86	13	27	9	42	12
Months Since Last Visit to Dentist						
0	38	6	25	8	24	7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Months Since Last Medical Check-up (As of 12/76)						
Less than 1	44	6.7	29	9.3	36	10.1
1-6	102	15.5	58	18.5	71	19.9
7-12	37	5.6	18	5.8	16	4.5
13-18	42	6.5	11	4.7	14	4.0
19-24	18	2.8	8	2.5	1	0.3
25-30	4	0.7	3	0.9	4	1.2
More than 30	11	2.0	5	1.5	17	5.1
Missing	398	60.7	177	56.5	198	55.5
Months Since Last Dental Check-up (As of 12/76)						
Less than 1	38	5.8	25	8.0	24	6.7
1-6	227	34.7	131	41.8	107	30.0
7-12	133	20.2	55	7.5	26	7.3
13-18	71	10.8	18	5.8	17	4.8
19-24	44	6.6	10	3.1	7	2.1
25-30	3	0.5	2	0.6	3	0.9
More than 30	6	1.2	3	0.9	3	0.9
Missing	134	20.4	69	22.0	170	47.6

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
DPT Shots						
Yes	641	97.7	310	99.0	341	95.5
No	5	0.8			7	2.0
Missing	10	1.5	3	1.0	9	2.5
Polio Vaccine						
Yes	645	98.3	309	98.7	344	96.4
No	6	0.9	1	.3	4	1.1
Missing	5	0.8	3	1.0	9	2.5
Measles Shots						
Yes	641	97.7	306	97.8	336	94.1
No	9	1.4	3	1.0	11	3.1
Missing	6	0.9	4	1.3	10	2.8
Months of Preschool Experience						
1	2	0.3	10	3.2		
2	6	0.9	2	.6		
3	5	0.8	8	2.6		
4	7	1.1	9	2.9		
5	10	1.5	12	3.8		
6	10	1.5	11	3.5		
7-10	385	58.7	96	30.7	1	.3
11-13	29	4.4	26	8.3		

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Months of Preschool Experience (continued)						
14-19	120	18.3	54	17.3		
20-25	32	4.9	33	10.5		
26+	29	4.4	46	14.7		
Missing	21	3.2	6	1.9	356	99.7
Days/Week in Preschool						
1	3	0.5	22	7.0		
2	12	1.8	30	9.6		
3	16	2.4	27	8.6		
4	178	27.1	13	4.2		
5	421	64.2	211	67.4		
Missing	26	4.0	10	3.2	356	99.7
Full or Part-time Preschool						
More than 4 Hours	344	52.4	146	46.6	1	.3
4 Hours or less	289	44.1	160	51.1		
Missing	23	3.5	7	2.2	356	99.7
Months of Head Start						
2	1	0.2				
3	3	0.5				
4	4	0.6	2	.6		
5	3	0.5	2	.6		
6	6	0.9	5	1.6		
7	7	1.1	5	1.6		
8	29	4.4	9	2.9		

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	
Months of Head Start (continued)						
9	125	19.1	52	16.6		
10	13	2.0				
11	5	0.8	2	.6		
12	7	1.1				
13	2	0.3				
14	11	1.7				
15	3	0.5				
16	7	1.1				
17	3	0.5				
18	43	6.6				
19	4	0.6				
20	4	0.6				
23	1	0.2				
24	8	1.2				
25	23	3.5				
Missing	344	63.7	191	61.0	357	100
Days/Week Head Start						
2	1	0.2	4	1.3		
3	4	0.6	2	.6		
4	66	10.1	19	6.1		
5	243	37.0	99	31.6		
6			1	.3		
Missing	342	52.1	188	60.1	357	100
Full or Part Time Head Start						
More than 4 Hours	192	29.3	74	23.6		
4 Hours of Less	117	17.8	52	16.6		
Missing	347	52.9	187	59.7	357	100

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Did Preschool Help Child Feel Sure of Himself?						
No	24	3.7	14	4.5		
Some	185	28.2	105	33.5		
A Great Deal	431	65.7	176	56.2	1	.3
Missing	16	2.4	18	5.8	356	99.7
Has Preschool Helped Child Get Along with Others?						
No	20	3.0	12	3.8		
Some	155	23.6	104	33.2		
A Great Deal	476	72.6	182	58.1		
Missing	5	0.8	15	4.8		
Has Preschool Helped Child Like to Do School Work?						
No	48	7.3	1	.3		
Some	162	24.7				
A Great Deal	430	65.5				
Missing	16	2.4	356	99.7		
Has Preschool Helped Child to Think and Understand?						
No	25	3.8				
Some	237	36.1				
A Great Deal	376	57.3	1	.3		
Missing	18	2.7	356	99.7		

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Has Preschool Helped Child with Reading?						
No	250	38.1				
Some	218	33.2	1	.3		
A Great Deal	156	23.8				
Missing	32	4.9	356	99.7		
Has Preschool Helped Child With Arithmetic?						
No	76	11.6	55	17.6		
Some	300	45.7	141	45.0		
A Great Deal	263	40.1	97	31.0	1	.3
Missing	17	2.6	20	6.4	356	99.7
How About Teaching About Community?						
No	31	4.7	57	18.2		
Some	194	29.6	96	30.7		
A Great Deal	408	62.2	144	46.0	1	.3
Missing	23	3.5	16	5.1	356	99.7
Has Preschool Helped Child Learn About Cultural Background?						
No	127	19.4	100	31.9		
Some	239	36.4	105	33.5	1	.3
A Great Deal	204	31.1	64	20.4		
Missing	86	13.1	44	14.1	356	99.7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Has Preschool Helped with Personal Hygiene, Food Habits?						
No	13	2.0	27	8.6		
Some	110	16.8	88	28.1		
A Great Deal	530	80.8	181	57.8		
Missing	3	0.5	17	5.4		
How Helpful Has Preschool Been in General?						
Not helpful	4	0.6	5	1.6		
Fairly helpful	74	11.3	51	16.3		
Very helpful	299	45.6	142	45.4	1	.3
Extremely helpful	269	41.0	100	31.9		
Missing	10	1.5	15	4.8	356	99.7
Has Preschool Helped Parent Understand What Child Does in School?						
No	55	8.4	65	20.8		
Some	183	27.9	103	32.9		
A Great Deal	405	61.7	123	3[illegible].3	1	.3
Missing	13	2.0	22	7.0	356	99.7
Has Preschool Helped Parent Get to Know Child's Teacher?						
No	237	36.1	168	53.7		
Some	184	28.0	66	21.1		
A Great Deal	224	34.1	62	19.8	1	.3
Missing	11	1.7	17	5.4	356	99.7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Has Preschool Helped Parent Help Child with School Work?						
No	113	17.2	119	38.0		
Some	220	33.5	84	26.8		
A Great Deal	310	47.3	92	29.4		
Missing	13	2.0	18	5.8	357	100
Has Preschool Helped Parent Understand How Children Learn?						
No	45	6.9	52	16.6		
Some	174	26.5	114	36.4		
A Great Deal	424	64.6	128	40.9	1	.3
Missing	13	2.0	19	6.1	356	99.7
Has Preschool Helped Parent Become Involved in School Activities?						
No	126	19.2	84	26.8		
Some	220	33.5	105	33.5		
A Great Deal	297	45.3	105	33.5	1	.3
Missing	13	2.0	19	6.1	356	99.7
Has Preschool Made Parents More Aware of Importance of Nutrition?						
No	109	16.6	131	41.9	1	.3
Some	186	28.4	66	21.1		
A Great Deal	353	53.8	102	32.6		
Missing	8	1.2	14	4.5	356	99.7
Did Anyone from Preschool Visit at Home Last Year?						
No	117	17.8	164	52.4		
Yes	531	80.9	134	42.8	1	.3
Missing	8	1.3	15	4.8	346	99.7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Often did Someone Visit?						
Once a Year	90	13.7	29	9.3		
Twice a Year	206	31.4	50	16.0		
Four times a Year	105	16.0	24	7.7		
Every Month	121	18.4	28	8.9	1	.3
Missing	134	20.4	182	58.1	356	99.7
Most Common Purpose of Visits						
Social	26	.4	10	3.2		
To Discuss Progress	119	18.1	34	10.9	1	.3
To Help with Family Problems	4	0.6				
Health, Hygience, Safety	16	2.4	1	.3		
Other	21	3.2	4	1.3		
Missing	470	71.6	264	84.3	356	99.7
Did Preschool Make any Arrangements for Medical Care?						
No	124	18.9	169	54.0		
Yes	578	79.0	128	40.9	1	.3
Missing	14	2.1	16	5.1	356	99.7
Did the Program Help Pay?						
No	50	7.6	19	6.1	1	.3
Yes	452	68.9	101	32.3		
Comments	12	1.8	7	2.2		
Missing	142	21.6	186	59.4	356	99.7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How about Arrangements for Dental Care?						
No	129	19.7	193	61.7		
Yes	515	78.5	99	31.6	1	.3
Missing	12	1.8	21	6.7	356	99.7
Did the Program Help Pay?						
No	43	6.6	16	5.1	1	.3
Yes	463	70.6	83	26.5		
Comments	8	1.2	2	.6		
Missing	142	21.6	212	67.7	356	99.7
Did Preschool Provide Opportunity to get Together with Other Parents?						
No	41	6.3	59	18.8		
Yes	613	93.4	239	76.4	1	.3
Missing	2	0.3	15	4.8	356	99.7
How Often Provided?						
Every 2 months	42	6.4	35	11.2		
Once a month	142	21.6	32	10.2		
Twice a Month	337	51.4	95	30.4	1	.3
Every Week	57	8.7	24	7.7		
Other	11	1.7	43	13.7		
Missing	67	10.2	84	26.8	356	99.7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Often Did Parent Go?						
Never	32	4.9	10	3.2		
Less Than Half	150	22.9	49	15.7	1	.3
Half the Time	118	18.0	36	11.5	356	99.7
All or Most	312	47.6	139	44.4		
Missing	44	6.7	79	25.2		
What Parts of Parent Activities were Most Helpful?						
Social						
Mentioned	184	28.0	77	24.6		
Not Mentioned	59	9.0	20	6.4		
Don't Know, Missing	413	63.0	216	69.0	357	100
Educational (Adult)						
Mentioned	89	13.6	30	9.6		
Not Mentioned	508	77.4	263	84.0		
Don't Know, Missing	59	9.0	20	6.4	357	100
Educational (Children)						
Mentioned	300	45.7	119	38.0		
Not Mentioned	297	45.3	174	55.6		
Don't Know, Missing	59	9.0	20	6.4	357	100
Community Services						
Mentioned	67	10.2	18	5.8		
Not Mentioned	530	80.8	275	87.9		
Missing	59	9.0	20	6.4	357	100
Health/Nutrition						
Mentioned	82	12.5	23	7.3		
Not Mentioned	515	78.5	270	86.3		
Don't Know, Missing	59	9.0	20	6.4	357	100

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Other						
Mentioned	57	8.5	29	9.3		
Not Mentioned	541	82.5	264	84.3		
Don't Know, Missing	59	910	20	6.4	357	100
Has Preschool been Helpful to Respondent?						
No	28	4.3	36	11.5		
Some	193	29.4	84	26.8		
A Great Deal	421	64.2	180	57.5		
Missing	14	2.1	13	4.2	356	99.7
Did Respondent Help in Preschool Class?						
No	209	31.9	149	47.6	1	.3
Yes	437	66.6	152	48.6		
Missing	10	1.5	12	3.8	356	100
How Often?						
Less than 4 Times a Year	57	8.7	37	11.8		
4 Times a Year	63	9.6	34	10.9		
Once a Month	81	12.3	28	8.9		
Twice a Month	112	17.1	16	5.1		
Once a Week	125	19.1	37	11.8		
Missing	218	33.2	161	51.4	357	100
Has Head Start Helped with Family or Personal Problems?						
No	418	63.7	70	22.4	1	.3
Some	130	19.8	27	8.6		
A Great Deal	88	13.4	22	7.0		
Missing	20	3.0	194	62.0	356	99.7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Could You Mention Problems Head Start has Helped You With?						
Medical/Dental						
Mentioned	40	6.1	10	3.2		
Not Mentioned	610	93.0	302	96.5	357	100
Missing	6	0.9	1	.3		
Health/Nutrition						
Mentioned	24	3.7	6	1.9		
Not Mentioned	626	95.4	306	97.8		
Missing	6	0.9	1	.3	357	100
Behavior Problems						
Mentioned	39	5.9	12	3.8		
Not Mentioned	611	93.1	300	95.8		
Missing	6	0.9	1	.3	357	100
Social Development						
Mentioned	46	7.0	10	3.2		
Not Mentioned	604	92.1	302	96.5		
Missing	6	0.9	1	.3	357	100
Academic Development						
Mentioned	34	5.2	8	2.6		
Not Mentioned	616	93.9	304	97.1		
Missing	6	0.9	1	.3	357	100
Babysitting						
Mentioned	17	2.6	8	2.6		
Not Mentioned	633	96.5	304	97.1		
Missing	6	0.9	1	.3	357	100
Understanding Child						
Mentioned	43	6.6	16	5.1		
Not Mentioned	607	92.5	296	94.6		
Missing	6	0.9	1	.3	357	100

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Other						
Mentioned	15	2.3	6	1.9		
Not Mentioned	635	96.8	306	97.8		
Missing	6	0.9	1	.3	357	100
Has Head Start Helped Respondent Find a Job?						
No	596	90.9	108	34.5	1	.3
Some	22	3.4	1	.3		
A Great Deal	29	4.4	8	2.6		
Missing	9	1.4	196	62.6	356	99.7
Has Head Start Assisted in Enrolling in School or College?						
No	583	88.9	112	35.8	1	.3
Some	32	4.9	2	.6		
A Great Deal	28	4.3	2	.6		
Missing	13	2.0	197	62.9	356	99.7
Any other Children Living at Home?						
Yes	589	89.8	261	83.4	330	92.4
No	59	9.0	47	15.0	20	5.6
Missing	8	1.2	5	1.6	7	2.0
How Many are Older?						
0	141	21.5	85	27.2	93	26.1
1	167	25.5	75	24.0	103	28.9
2	107	16.3	46	14.7	65	18.2
3	65	9.9	24	7.7	24	6.7
4	38	5.8	12	3.8	15	4.2
5	26	4.0	5	1.6	8	2.2

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Many are Older? (continued)						
6	19	2.9	4	1.3	3	.8
7	7	1.1	2	.6	8	2.2
8	6	0.9			4	1.1
9	2	0.3	1	.3		
10	2	0.3			1	.3
20	1	0.2				
Missing	75	11.5	59	18.8	33	9.2
How Many are Younger?						
0	193	29.4	95	30.4	100	28.0
1	262	39.9	127	40.6	147	41.2
2	86	13.1	23	7.3	56	15.7
3	20	3.0	7	2.2	12	3.4
4	4	0.6	1	.3		
5	4	0.6	2	.6		
6	1	0.2				
10	1	0.2				
Missing	85	13.0	58	18.5	41	11.5
Are There/Have There Ever Been Other Children in Head Start?						
Yes	442	67.4	92	29.4	70	19.6
No	134	20.4	165	62.7	253	70.9
Missing	80	12.2	56	17.9	34	9.5
How Many Altogether?						
0	8	1.2	2	.6	2	.6
1	234	35.7	40	12.8	54	15.1
2	114	17.4	29	9.3	16	4.5
3	61	9.3	14	4.5	4	1.1

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Many Altogether? (Con't)						
4	20	3.0	5	1.6	1	.3
5	12	1.8	3	1.0		
6	3	0.5	1	.3		
7	7	1.1	1	.3		
8			1	.3		
20			1	.3		
Missing	197	30.0	216	69.0	280	78.4
How Many Right Now?						
0	297	45.3	66	21.1	57	16.0
1	126	19.2	24	7.7	8	2.2
2	9	1.4	2	.6	3	.8
3	1	0.2				
Missing	223	34.0	221	70.6	289	81.0
Would Respondent Send any Younger Children to Preschool?						
Yes	630	96.0	285	91.1	233	65.3
No	18	2.7	15	4.8	93	26.1
Missing	8	1.2	13	4.2	31	8.7
Are there Particular Things Respondent Does to Help Child with School?						
Yes	588	89.6	296	94.6	322	90.2
No	59	9.0	12	3.8	26	7.3
Missing	9	1.4	5	1.6	9	2.2

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
What Kinds of Things?						
Academic						
Mentioned	570	86.9	288	92.0	319	89.4
Not Mentioned	82	12.5	25	8.0		
Missing	4	0.6			38	10.6
Playing, Getting Along with Other Children						
Mentioned	82	12.5	85	27.2	51	14.3
Not Mentioned	570	86.9	228	72.8	1	.3
Missing	4	0.6			305	85.4
Manners, Behavior, Paying Attention						
Mentioned	124	18.9	75	24.3	52	14.6
Not Mentioned	528	80.5	237	75.7	1	.3
Missing	4	0.6			304	85.2
Trips, Camping, Travel						
Mentioned	64	9.8	68	21.7	30	8.4
Not Mentioned	588	89.6	245	78.3	1	.3
Missing	4	0.6			326	91.3
Arts						
Mentioned	148	22.6	107	34.2	109	30.5
Not Mentioned	504	76.9	206	65.8	1	.3
Missing	4	0.6			247	69.2
How Often Does Child Ask for Help with School Work?						
Once a Month	82	12.5	58	18.5	73	20.4
2 or 3 Times a Month	27	4.1	14	4.5	12	3.4

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Often Does Child Ask for Help with School Work? (Con't)						
Once a Week	97	14.8	38	12.1	45	12.6
Several Times a Week	145	22.1	67	21.4	57	16.0
Every Day	257	39.2	117	37.4	137	38.4
Missing	48	7.3	19	16.1	33	9.2
How Well Does Respondent Think Child Will Do in School?						
Very Poor					1	0.3
Poor	14	2.1	1	.3	7	2.0
Average	198	30.2	76	24.3	101	28.3
Good	298	45.4	150	47.9	170	47.6
Excellent	139	21.2	74	23.6	74	20.7
Don't Know	6	0.9	6	1.9	4	1.1
Missing	1	0.2	6	1.9		
How Often Does Respondent and Child Talk about School?						
Once a Month	3	0.5			3	.8
2 or 3 Times a Month	7	1.1	4	1.3	3	.8
Several Times a Week	75	11.4	26	8.3	22	6.2
Almost Everyday	566	86.3	281	89.8	329	92.2
Missing	5	0.8	2	.6		
What Do You Talk about Most Often?						
School Work, Learning	376	57.3	201	64.2	214	59.9
Getting Along with Others	101	15.4	46	14.7	60	16.8
The Teacher	62	9.5	19	6.1	25	7.0
Missing	117	17.8	47	15.0	58	16.2

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
What is Talked About?						
Problems	164	25.0	60	19.2	67	18.8
Fun or Nice Times	427	65.1	210	67.1	259	72.5
Missing	65	9.9	43	13.7	31	8.7
Would Respondent Say Child's Teacher is?						
Not Very Good	11	1.7	3	1.0	1	.3
Fairly Good	28	4.3	9	2.9	12	3.4
Good	142	21.6	60	19.2	75	21.0
Very Good	232	35.4	112	35.8	92	25.8
Excellent	230	35.1	120	38.3	168	47.1
Don't Know	1	0.2	4	1.3	5	1.4
Missing	12	1.8	5	1.6	4	1.1
How Does Child Feel about School in General?						
Dislikes	4	0.6	1	.3	5	1.4
Likes a Little Bit	17	2.6	12	3.8	8	2.2
Likes Somewhat	69	10.5	34	10.9	26	7.3
Likes Very Much	253	38.6	122	39.0	163	45.7
Loves	307	46.8	140	44.7	153	42.9
Missing	6	0.9	4	1.3	2	.6
How Far Does Respondent Think Child Will Go in School?						
Finish 8th Grade	3	0.5	4	1.3	3	.8
Finish High School	323	49.2	89	28.4	152	42.6
Take Vocational Training	47	7.2	27	8.6	32	9.0
Finish 2 Year College	42	6.4	26	8.3	28	7.8
Finish 4 Year College	162	24.7	111	35.5	98	27.5

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Far Does Tespondent Think Child Will Go in School? (Con't)						
Go to Graduate School	29	4.4	25	8.0	18	5.0
Missing	50	7.6	31	9.9		
Agree/Disagree with Following:						
The Most Important Quality of People is Their Driving Purpose to Get Ahead?						
Agree	396	60.4	123	39.3	176	49.3
Disagree	219	33.4	172	55.0	159	44.5
Missing	41	6.3	18	5.8	22	6.2
Sports and Games Take Up Too Much Time at School.						
Agree	105	16.0	40	12.8	53	14.8
Disagree	518	79.0	262	83.7	290	81.2
Missing	33	5.0	11	3.5	14	3.9
People Who Don't Have Much Education Enjoy Life Just as Much as Well Educated People.						
Agree	331	50.5	176	56.2	161	45.1
Disagree	287	43.8	107	34.2	172	48.2
Missing	38	5.8	30	9.6	24	6.7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
If I Disagree with the Principal There is Nothing or Very Little I Can Do.						
Agree	167	25.5	52	16.6	58	16.2
Disagree	453	69.1	246	78.6	279	78.2
Missing	36	5.5	15	4.8	20	5.6
Most Teachers Do Not Want to be Bothered by Parents Coming to See Them.						
Agree	89	13.6	22	7.0	30	8.4
Disagree	540	82.3	275	87.9	317	88.8
Missing	27	4.1	16	5.1	10	2.8
The Only Way Poor People Can Raise the Way They Live is to Get a Good Education.						
Agree	449	68.4	195	62.3	237	66.4
Disagree	178	27.1	103	32.9	106	29.7
Missing	29	4.4	15	4.8	14	3.9
A Mother Should Do Her Best to Avoid Disappointments for Her Child.						
Agree	455	69.4	165	52.7	208	58.3
Disagree	174	26.5	138	44.1	138	38.7
Missing	27	4.1	10	3.2	11	3.8

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Teachers Who are Very Friendly are Not Able to Control the Children.						
Agree	117	17.8	39	12.5	48	13.4
Disagree	509	77.6	262	83.7	298	83.5
Missing	30	4.6	12	3.8	11	3.1
Most Teachers Would be Good Examples for My Children.						
Agree	488	74.4	234	74.8	267	74.8
Disagree	116	17.7	58	18.5	68	19.0
Missing	52	7.9	21	6.7	22	6.2
Most Children Have to be Made to Learn.						
Agree	302	46.0	95	30.4	137	38.4
Disagree	327	49.8	209	66.8	211	59.1
Missing	27	4.1	9	2.9	9	2.5
Parents Can Do Very Little to Improve the Schools.						
Agree	89	13.6	25	8.0	41	11.5
Disagree	538	82.0	283	90.4	307	86.0
Missing	29	4.4	5	1.6	9	2.5
In School There Should be More Important Things Than Getting Good Grades.						
Agree	385	58.7	207	66.1	242	67.8
Disagree	235	35.8	86	27.5	99	27.7
Missing	36	5.5	20	6.4	16	4.5

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Kids Cut Up So Much that Teachers Can't Teach.						
Agree	262	39.9	80	25.6	116	32.5
Disagree	333	50.8	207	66.1	211	59.1
Missing	61	9.3	26	8.3	30	8.4
There are Some Children in the School I Would Not Want My Child to Play With.						
Agree	248	37.8	140	44.7	133	37.3
Disagree	385	58.7	149	47.6	203	56.9
Missing	23	3.5	24	7.7	21	5.9
The Law Should be Changed so that Boys and Girls Would have to Stay in School until they Have completed High School!						
Agree	437	66.6	171	54.6	223	62.5
Disagree	190	29.0	126	40.3	120	33.6
Missing	29	4.4	16	5.1	14	3.9
Has Respondent Gone to Talk with Child's Teacher this Year?						
Yes	537	81.9	227	88.5	289	81.0
No	117	17.8	34	10.9	68	19.0
Missing	2	0.3	2	.6		

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Many Times?						
0	124	18.9	39	12.5	70	19.6
1	154	23.5	69	22.0	75	21.0
2	150	22.9	72	23.0	97	27.2
3	85	13.0	58	18.5	48	13.4
4	61	9.3	28	8.9	20	5.6
5	22	3.4	15	4.8	17	4.5
6	15	2.3	2	.6	10	2.8
7	4	0.7	3	1.0	3	.8
8	3	0.5	2	.6	2	.6
9	2	0.3	4	1.3		
10	7	1.1	6	1.9	4	1.1
11	2	0.3				
12	6	0.9	4	1.3	1	0.3
14	2	0.3				
15	19	2.9	11	3.5	11	3.1
How Did it Come about?						
School or Teacher Asked	157	23.9	91	29.1	90	25.2
Decided on Own	215	32.8	88	28.1	95	26.6
Both	140	21.3	87	27.8	89	24.9
Other	7	1.1	5	1.6	6	1.7
Missing	137	20.9	42	13.4	77	21.6
Which of the Following were Talked About?						
Problems in School						
Yes	255	38.9	126	40.3	137	38.4
No	401	61.1	187	59.7	220	61.6

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
What Child is Learning						
Yes	447	68.1	244	78.0	228	63.9
No	209	31.9	69	22.0	129	36.1
Child's School Behavior						
Yes	358	54.6	212	67.7	192	53.8
No	298	45.4	101	32.3	165	46.2
Books or Teaching Materials						
Yes	244	37.2	166	53.0	124	34.7
No	412	62.8	147	47.0	233	65.3
Teacher's Teaching Methods						
Yes	173	26.4	112	35.8	96	26.9
No	483	73.6	201	64.2	261	73.1
Compared to Other Children Would Respondent Say Child's General Ability is						
Much More than Others	35	5.3	24	7.7	14	3.9
More than Others	158	24.1	105	33.5	98	27.5
The Same as Others	425	64.8	171	54.6	228	63.9
Less than Others	20	3.0	4	1.3	9	2.5
Much Less than Others	5	0.8	1	.3	2	.6
Don't Know	11	1.7	7	2.2	4	1.1
Missing	2	0.3	1	.3	2	.6

PARENT INTERVIEW FREQUENCIES

Preschool Group	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
Variables	N	%	N	%	N	%
How Satisfied in Respondent with Child's Progress in School?						
Very Satisfied	418	63.7	218	69.6	224	62.7
More or Less Satisfied	203	30.9	84	26.8	113	31.7
Not Satisfied	31	4.7	9	2.9	16	4.5
Missing	4	0.6	2	.6	4	1.1
How Many Books are There at Home that Children Look at or Read?						
Fifteen or More	381	58.1	231	73.8	237	66.4
Several, but not 15	190	29.0	62	19.8	79	22.1
Three or Less	82	12.5	19	6.1	40	11.2
Missing	3	0.5	1	.3	1	.3
How Often Does Child Look at Books or Read at Home?						
Everyday	412	62.8	189	60.4	209	58.5
Several Times a Week	186	28.4	94	30.0	108	30.3
Not Often	56	8.5	29	9.3	38	10.6
Missing	2	0.3	1	.3	2	.6
How Often Does Someone Read to Child?						
Everyday	159	24.2	82	26.2	97	27.2
Several Times a Week	357	54.4	154	49.2	158	44.3
Not Often	137	20.9	75	24.0	100	28.0
Missing	3	0.5	2	.6	2	.6

PARENT INTERVIEW FREQUENCIES

Preschool Group	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
Variables	N	%	N	%	N	%
Which of the Following Does Child Have to Play with at Home?						
Crayons and Paper						
Yes	644	98.2	306	97.8	349	97.8
No	11	1.7	6	1.9	7	2.0
Missing	1	0.2	1	.3	1	.3
Scissors						
Yes	491	74.8	270	86.3	289	81.0
No	162	24.7	42	13.4	68	19.0
Missing	3	0.5	1	.3		
Tape, Past, Stapler						
Yes	489	74.5	276	88.2	290	81.2
No	164	25.0	36	11.5	67	18.8
Missing	3	0.5	1	.3	67	18.8

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Jigsaw Puzzles						
Yes	434	66.2	253	80.8	258	72.3
No	219	33.4	59	18.8	98	27.5
Missing	3	0.5	1	0.3	1	0.3
Catalogs or Magazines to Cut Up						
Yes	588	89.6	277	88.5	325	91.0
No	66	10.1	34	10.9	32	9.0
Missing	2	0.3	2	0.6		
Paint or Magic Markers						
Yes	430	65.5	248	79.2	239	66.9
No	223	34.0	63	20.1	116	32.5
Missing	3	0.5	2	0.6	2	0.6
Clay or Playdough						
Yes	367	55.9	207	66.1	215	60.2
No	280	42.7	105	33.5	137	38.4
Missing	3	0.5	2	0.6	2	0.6
"Put-together" Toys						
Yes	418	63.7	250	79.9	246	68.9
No	232	35.4	62	19.8	109	30.5
Missing	6	0.9	1	0.3	2	0.6

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Hammer, Nails, Wood Scraps						
Yes	273	41.6	139	44.4	166	46.5
No	380	57.9	173	55.3	190	53.2
Missing	3	0.5	1	0.3	1	0.3
Knitting, Sewing Materials						
Yes	354	54.0	194	62.0	210	58.8
No	299	45.6	118	37.7	147	41.2
Missing	3	0.5	1	0.3		
Toys Using Cans or Cartons						
Yes	374	57.0	187	59.7	206	57.7
No	278	42.4	125	39.9	150	42.0
Missing	4	0.6	1	0.3	1	0.3
Plants in Pots or Garden						
Yes	240	36.6	149	47.6	132	37.0
No	412	62.8	163	52.1	225	63.0
Missing	4	0.6	1	0.3		
How Much Time Does Child Watch TV?						
Several hours a week	182	27.7	113	36.1	111	31.1
Up to 3 hours a day	214	32.6	120	38.3	122	34.2
More than 3 hours a day	253	38.6	79	25.2	119	33.3
Missing	7	1.1	1	0.3	5	1.4

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Often Does Child Watch the Following Shows?						
Sesame Street						
Never	162	24.7	46	14.7	83	23.2
Seldom	142	21.6	67	21.4	84	23.5
Several Times a Week	107	16.3	72	23.0	52	14.6
Every Day	225	34.3	118	37.7	127	35.6
Missing	20	3.0	10	3.2	11	3.1
Electric Company						
Never	293	44.7	91	29.1	170	47.6
Seldom	97	14.8	58	21.7	62	17.4
Several Times a Week	94	14.3	56	17.9	33	9.2
Every Day	131	20.0	80	25.6	72	20.2
Missing	41	6.3	18	5.8	20	5.6
Mr. Rogers						
Never	392	59.8	138	44.1	216	60.5
Seldom	77	11.7	63	20.1	44	12.3
Several Times a Week	57	8.7	38	12.1	19	5.3
Every Day	73	11.1	41	13.1	45	12.6
Missing	57	8.7	33	10.5	33	9.2

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
How Often Does Child Watch the Following Shows?						
Cartoons						
Never	7	1.1	2	0.6	9	2.5
Seldom	120	18.3	74	23.6	96	26.9
Several Times a Week	170	25.9	86	27.5	99	27.7
Every Day	335	51.1	14.3	45.7	146	40.9
Missing	24	3.7	8	2.6	7	2.0
Villa Alegre						
Never	528	80.5	235	75.1	274	76.8
Seldom	40	6.1	40	12.8	25	7.0
Several Times a Week	15	2.3	5	1.6	11	3.1
Every Day	14	2.1	6	1.9	6	1.7
Missing	59	9.0	27	8.6	41	11.5
Does Respondent Agree or Disagree With the Following?						
No matter how hard a person tries, he can't do much about what happens to him.						
Agree	180	27.4	56	17.9	61	17.1
Disagree	453	69.1	245	78.3	287	80.4
Missing	23	3.5	12	3.8	9	2.5
A person shouldn't plan ahead because things don't usually work out.						
Agree	179	27.3	53	16.9	62	17.4
Disagree	447	68.1	244	78.0	281	78.7
Missing	30	4.6	16	5.1	14	3.9

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
This world is run by a few big shots and there isn't much the little guy can do about it.						
Agree	174	26.5	53	16.9	62	17.4
Disagree	433	66.0	235	75.1	271	75.9
Missing	49	7.5	25	8.0	24	6.7
How many adults live at home?						
1	184	28.0	79	25.2	48	13.4
2	354	54.0	205	65.5	264	73.9
3	65	9.9	18	5.8	32	9.0
4	32	4.9	8	2.6	9	2.5
5	9	1.4	1	0.3	2	0.6
6	4	0.6				
7	2	0.3			1	0.3
8	1	0.2				
9	2	0.3			1	0.3
12	1	0.2				
Missing	2	0.3	2	0.6		
Do grandparents, aunts, or uncles live in the home?						
Yes	119	18.1	34	10.9	48	13.4
No	532	81.1	274	87.5	305	85.4
Missing	5	0.8	5	1.6	4	1.1

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Does child's mother have a paying job?						
Yes	263	40.1	165	52.7	131	36.7
No, unemployed	115	17.9	38	12.1	49	13.7
No, homemaker	274	41.8	107	34.2	176	49.3
Missing	4	0.6				
If employed, what is mother's job status?						
Full-time	187	28.5	120	38.3	89	24.9
Regular Part-time	59	9.0	33	10.5	36	10.1
Occasional Part-time	23	3.5	14	4.5	11	3.1
Missing	387	59.0	146	46.6	221	61.9
What does mother do?						
Executive, Major Professional	3	0.5			2	0.6
Manager, Lesser Professional	14	2.1	31	9.9	16	4.5
Administrative, Semi-Professional	8	1.2	7	2.2	13	3.6
Clerical, Technical Assistant	34	5.2	55	17.6	20	5.6
Skilled Worker	8	1.2	6	1.9	8	2.2
Semiskilled Worker	130	19.8	33	10.5	42	11.8
Unskilled Worker	122	18.6	43	13.7	53	14.8
Welfare					3	0.8
Retirement, Pension	32	4.9	6	1.9	12	3.4
Missing	305	46.5	132	42.2	188	52.7

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Any other income used to support family?						
Yes	387	59.0	215	68.7	281	78.7
No	212	32.3	82	26.2	55	15.4
No, Unemployed	34	5.2	12	3.8	5	1.4
Missing	23	3.5	4	1.3	16	4.5
Who else provides family income?						
Mother, Stepmother						
Yes	46	7.0	7	2.2	14	3.9
No	603	91.9	304	97.1	340	95.2
Missing	7	1.1	2	0.6	3	0.8
Father, Stepfather						
Yes	340	51.8	197	62.9	263	73.7
No	309	47.1	114	36.4	91	25.5
Missing	7	1.1	2	0.6	3	0.8
Older Sibling						
Yes	8	1.2	1	0.3	8	2.2
No	641	97.7	310	99.0	346	96.9
Missing	7	1.1	2	0.6	3	0.8
Other Relative						
Yes	8	1.2	1	0.3	8	2.2
No	641	97.7	310	99.0	34.6	96.9
Missing	7	1.1	2	0.6	3	0.8

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Who provides main family income?						
Mother	34	5.2	15	4.8	19	5.3
Father	238	36.3	130	41.5	194	54.3
Sibling	2	0.3				
Other Relative	27	4.1	11	3.5	7	2.0
Other	8	1.2	9	2.9	3	0.8
Missing	347	52.9	148	47.3	134	37.5
Main Provider's Job Status:						
Full-time	316	48.2	192	61.3	261	73.1
Regular Part-time	17	2.6	7	2.2	6	1.7
Occasional Part-time	19	2.9	3	1.0	6	1.7
Occasional Part-time	19	2.9	3	1.0	6	1.7
Missing	304	46.4	111	35.5	84	23.5
What does main provider do?						
Executive, Major Professional	1	0.2	6	1.9	1	0.3
Manager, Lesser Professional	9	1.4	31	9.9	32	9.0
Administrative, Semi-professional	18	2.7	21	6.7	26	7.3
Clerical, Technical Assistant	6	0.9	5	1.6	4	1.1
Skilled Worker	74	11.3	56	17.9	74	20.7
Semiskilled Worker	127	19.4	45	14.4	71	19.9
Unskilled Worker	106	16.2	28	8.9	49	13.7
Retirement, Pension	15	2.3	8	2.6	9	2.5
Welfare	20	3.0	9	2.9	7	2.0
Don't Know, No Response	16	2.4	3	1.0	1	0.3
Missing	264	40.2	101	32.3	83	23.2

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Is respondent registered to vote?						
Yes	427	65.1	237	75.7	258	72.3
No	212	32.2	72	23.0	94	26.3
Missing	17	2.6	4	1.3	5	1.4
Did respondent vote in last presidential election?						
Yes	332	50.6	198	63.3	225	63.0
No	301	45.9	134	42.8	130	36.4
Missing	39	5.9	12	3.9	11	3.1
How many voted in last presidential election?						
0	141	21.5	38	12.1	65	18.2
1	204	31.1	130	41.5	169	47.3
2	42	6.4	13	4.2	22	6.2
3	9	1.4	5	1.6	6	1.7
4	5	0.8				
5	0	0				
6	2	0.3				
7	1	0.2				
10	1	0.2				
Missing	251	38.3	127	40.6	91	25.5

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Highest Grade Mother Completed						
1	0	0				
2	0	0	1	0.3	1	0.3
3	2	0.3			1	0.3
4	2	0.3			3	0.8
5	6	0.9			1	0.3
6	9	1.4	4	1.3	2	0.6
7	21	3.2	4	1.3	7	2.0
8	57	8.7	6	1.9	15	4.2
9	54	8.2	12	3.8	16	4.5
10	79	12.0	13	4.2	33	9.2
11	66	10.1	17	5.4	38	10.6
12	278	42.4	146	46.6	159	44.5
Other Non-college	13	2.0	23	7.3	15	4.2
College						
1 Year	19	2.9	12	3.8	17	4.8
2 Years	19	2.9	14	4.5	14	3.9
3 Years	5	0.8	3	1.0	8	2.2
4 Years	5	0.8	22	7.0	6	1.7
Graduate School	2	0.3	12	3.8	4	1.1
Missing	19	2.9	24	7.7	17	4.8

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Highest Grade Main Provider Completed						
1	2	0.3			1	0.3
2	1	0.2			1	0.3
3	7	1.1	1	0.3	1	0.3
4	4	0.6	1	0.3	2	0.6
5	6	0.9	2	0.6	4	1.1
6	5	0.8	5	1.6	1	0.3
7	14	2.1	4	1.3	6	1.7
8	47	7.2	16	5.1	24	6.7
9	35	5.3	5	1.6	14	3.9
10	36	5.5	10	3.2	15	4.2
11	30	4.6	3	1.0	17	4.8
12	137	20.9	92	29.4	102	28.6
Other Non-college	19	2.9	9	2.9	13	3.6
College						
1 Year	9	1.4	4	1.3	13	3.6
2 Years	10	1.5	7	2.2	15	4.2
3 Years	4	0.6	7	2.2	7	2.0
4 Years	4	0.6	14	4.5	13	3.6
Graduate School	2	0.3	26	8.3	11	3.1
Missing	284	43.3	107	34.2	97	27.2

PARENT INTERVIEW FREQUENCIES

Preschool Group / Variables	HEAD START		OTHER PRESCHOOL		NO PRESCHOOL	
	N	%	N	%	N	%
Household Income, All Sources						
Under $1500	32	5	8	3	14	4
$1500-1999	27	4	6	2	9	3
2000-2499	34	5	10	3	11	3
2500-3199	41	6	6	2	4	1
3200-3799	33	5	9	3	11	3
3800-4199	25	4	11	4	5	1
4200-4399	18	3	7	2	4	1
4400-4699	16	2	5	2	9	3
4700-4999	20	3	7	2	3	1
5000-5199	38	6	7	2	7	2
5200-5699	24	4	5	2	5	1
4700-6199	25	4	11	4	7	2
5200-6799	18	3	8	3	6	2
6800-7199	18	3	10	3	4	1
7200-7399	9	1	4	1	2	1
7400-7699	7	1	5	2	8	2
7700-7999	17	3	5	2	5	1
8000-8199	24	4	4	1	13	4
8200-8699	14	2	8	3	7	2
8700-9199	13	2	7	2	8	2
9200-9799	11	2	13	4	10	3
9800-9999	12	2	8	3	10	3
10000-11999	36	5	32	10	48	13
12000-14999	36	5	42	13	35	10
15000+	23	4	40	13	61	17
Missing	8	13	35	11	51	14

Hess Educational Attitude Scale Items
Loading Highest on Each Factor

Factor	Loading	Elgen Value	Percent of Variance
Factor I: School Dissatisfaction-Alienation		2.88	19.2
If I disagree with the principal, there is nothing or very little I can do	.63		
Most teachers do not want to be bothered by parents coming to see them	.58		
Parents can do very little to improve the schools	.69		
Factor II: Educational Need to Avoid Failure		1.42	9.5
The most important quality of people is their driving purpose to get ahead	.57		
A mother should do her best to avoid disappointments for her child	.58		
Most children have to be made to learn.	.33		
In schools there should be more important things than getting good grades	-.69		
Kids cut up so much that the teachers can't teach	.34		
Factor III: Value of Education			9.5
People who don't have much education enjoy life just as much as well educated people	-.71		
The only way poor people can raise the way they live is to get a good education	.67		
The law should be changed so that boys and girls would have to stay in school until they have completed high school	.44	1.42	7.6

Factor	Loading	Elgen Value	Percent of Variance
Factor IV: School Dissatisfaction - Pupils			
Sports and games take up too much time at school	.54		
Kids cut up so much that teachers can't teach	.45		
The law should be changed so that boys & girls would have to stay in school until they have completed high school	.77	1.07	7.1
TOTAL VARIANCE ACCOUNTED FOR BY THE FACTORS..............43.4%			

Item Difficulties and Coefficient Alphas for School Dissatisfaction (Alienation) Factor from Parent Interview

Item	Item Mean	S.D.	Item Total Correlatio
If I disagree with the principal, there is nothing or very little I can do	.82	.67	.79
Most teachers do not want to be bothered by parents coming to see them	.75	.58	.81
Teachers who are very friendly are not able to control the children	.79	.62	.81
Parents can do very little to improve the schools	.76	.59	.84
Total Scale N = 1985	3.11	2.21	Standardized Item Alpha = .92

Frequencies for School Dissatisfaction (Alienation) Factor from Parent Interview

Score	N	%
1.00	871	62.6
1.25	269	19.3
1.33	36	2.6
1.50	114	8.2
1.67	14	1.0
1.75	58	4.2
2.00	30	2.2
TOTAL	1392	100.0

Item Difficulties and Coefficient Alphas for Achievement Motivation Factor from Parent Interview

Item	Item Mean	S.D.	Item Total Correlatio
The most important quality of people is their driving purpose to get ahead	1.04	.84	.78
A mother should do her best to avoid disappointments for her child	1.12	.87	.81
In schools there should be more important things than getting good grades	1.1	.87	.73
Most children have to be made to learn	.97	.78	.79
			Standardized Item
Total Scale N = 1985	4.23	2.95	Alpha = .90

Item Difficulties and Coefficient Alphas for Value of Education Factor from Parent Interview

Item	Item Mean	S.D.	Item Total Correlation
People who don't have much education enjoy life just as much as well-educated people	1.01	84	.68
The only way poor people can raise the way they live is to get a good education.	1.15	.88	.76
The law should be changed so that boys and girls would have to stay in school until they have completed high school	1.11	.87	.78
Total Scale N = 1985	3.27	2.29	Standardized Item Alpha = .86

Frequencies for Achievement Motivation Factor from Parent Interview

Score	N	%
1.00	66	4.7
1.25	258	18.6
1.33	49	3.5
1.50	386	27.8
1.67	61	4.4
1.75	338	24.3
2.00	232	16.7
TOTAL	1390	100.0

Frequencies for Value of Education Factor from Parent Interview

Score	N	%
1.00	73	5.2
1.33	301	21.6
1.50	74	5.3
1.67	595	42.8
2.00	348	25.0
TOTAL	1391	100.0

Item Difficulties and Coefficient Alphas for School Dissatisfaction (Pupils) Factor from Parent Interview

Item	Item Mean	S.D.	Item Total Correlatio
Sports and games take up too much time at school	.78	.62	.74
Kids cut up so much that the teachers can't teach	.89	.77	.72
There are some children in the school I would not want my child to play with	.95	.78	.72
Total Scale N = 1985	2.62	1.91	Standardized Item Alpha = .85

Frequencies for School Dissatisfaction (Pupils) Factor from Parent Interview

Score	N	%
1.00	5.8	37.2
1.33	477	34.3
1.50	71	5.1
1.67	228	16.4
2.00	98	7.0
TOTAL	1392	100.0

Parent Child Interaction Items Loading Highest on Each Factor

Factor	Loading	Elgen Value	Percent of Variance
Factor I: Verbal Interaction/Exposure			
Number of books in the home that child can look at or read	.45		
How often child looks at books or reads by him(her)self at home	.43		
How often someone reads stories to the child	.46	2.18	18.2
Factor II: Satisfaction with Child's Schooling			
How often do you and child talk about school?	.33		
How good is child's teacher?	.33		
How child feels about school	.46		
Satisfaction with child's progress in school	.46	1.37	11.4
Factor III: Expectations for child			
How well child is expected to do in school	.47		
How far child is expected to go in school	.38		
Rating of child's ability compared to other children same age	.57	1.09	9.1
Factor IV: Independent Student			
How often child comes for help on homework	-.65		
Satisfaction with child's teacher	.42		
Number of books in home for child to look at or read	.36	1.07	8.9
TOTAL PERCENT OF VARIANCE ACCOUNTED FOR BY THE FACTORS.................47.6%			

Item Difficulties and Coefficient Alphas for
Verbal Interaction/Exposure Factor from Parent Interview

Item	Item Mean	S.D.	Item Total Correlation
How many children's books are in your home that (your child) can look at or read?	1.78	1.29	.87
How often does (s)he look at books or read by him(her)self at home?	1.77	1.28	.89
How often does someone read stories to (your child)?	1.42	1.10	.86
			Standardized Item
Total Scale N = 1985	4.96	3.47	Alpha = .94

Frequencies for Verbal Interaction/Exposure Factor from Parent Interview

Score	N	%
1.00	34	2.4
1.33	61	4.4
1.50	1	0.1
1.67	114	8.2
2.00	215	15.5
2.33	342	24.6
2.50	1	0.1
2.67	378	27.2
3.00	243	17.5
TOTAL	1389	100.0

Item Difficulties and Coefficient Aophas for Satisfaction with Child's Progress in School Factor from Parent Interview

Item	Item Mean	S.D.	Item Total Correlation
How often do you and (your child) talk about school?	2.71	1.80	.94
Most schools have some good teachers and some not so good. Let's talk about the person who teaches (your child) most of the time. Would you say s(he) is excellent, very good, good, fairly good, or not very good?	2.90	2.12	.89
In general, how does (your child) feel about school?	2.99	2.08	.92
In general, how satisfied are you with (your child's) progress in school?	1.82	1.29	.92
			Standardized Item
Total Scale N = 1985	10.43	6.97	Alpha = .97

Frequencies for Satisfaction with Child's Progress in School Factor from Parent Interview

Score	N	%
1.50	1	0
1.75	2	0
2.25	8	1
2.50	10	1
2.67	4	0
2.75	39	3
3.00	77	6
3.25	123	9
3.33	11	1
3.50	227	16
3.67	9	1
3.75	313	22
4.00	303	22
4.25	244	17
4.33	3	0
4.50	2	0
4.75	6	0
5.00	9	1
5.25	5	0
TOTAL	1396	100.0

Item Difficulties and Coefficient Alphas for Parents' Expectations for their Children Factor from Parent Interviews

Item	Item Mean	S.D.	Item Total Correlation
How well do you think (your child) will do in school?	2.77	1.97	.87
How far do you think (your child) will get in school?	2.19	2.01	.70
Compared to other children, would you say (your child's) general ability is..	2.42	1.77	.82
			Standardized Item
Total Scale N = 1985	7.37	5.22	Alpha = .89

Frequencies for Parents' Expectations for their Children Factor from Parent Interview

Score	N	%
1.33	1	0
1.67	3	0
2.00	12	1
2.33	22	2
2.50	7	1
2.67	174	12
3.00	281	20
3.33	165	12
3.50	40	3
3.67	156	11
4.00	206	15
4.33	151	11
4.50	2	0
4.67	100	7
5.00	48	3
5.33	5	0
5.50	1	0
5.67	3	0
6.00	11	1
6.33	2	0
6.50	2	0
6.67	1	0
7.00	2	0
7.67	1	0
TOTAL	1396	100.0

Item Difficulties and Coefficient Alphas for Independent Student Factor from Parent Interview

Item	Item Mean	S.D.	Item Total Correlation
How often does (s)he come to you for help on school work?	2.39	2.12	.68
Most schools have some good teachers and some not so good. Let's talk about the person who teaches (your child) most of the time. Would you say (s)he is excellent, very good, good, fairly good, or not very good?	2.90	2.12	.78
How many children's books in your home that (your child) can look at or read?	1.78	1.29	.81
			Standardized Item
Total Scale N = 1985	7.07	4.95	Alpha = .88

Frequencies for Independent Student Factor from Parent Interview

Score	N	%
1.00	2	0
1.33	1	0
1.67	9	1
2.00	36	3
2.33	64	5
2.50	17	1
2.67	127	9
3.00	224	16
3.33	193	14
3.50	29	2
3.67	268	19
4.00	245	18
4.33	162	12
4.50	1	0
4.67	1	0
5.00	9	1
5.33	6	0
5.67	1	0
6.00	1	0
TOTAL	1396	100.0

Item Difficulties and Coefficient Alphas for General Locus of Control Factor from Parent Interview

Item	Item Mean	S.D.	Item Total Correlation
No matter how hard a person tries, he can't do much about what happens to him.	1.20	.89	.98
A person shouldn't plan ahead because things don't usually work out.	1.19	.90	.97
This world is run by a few big shots and there isn't much the little guy can do about it.	1.15	.91	.94
			Standardized Item
Total Scale N = 1985	3.54	2.65	Alpha = .98

Frequencies for General Locus Factor from Parent Interview

Score	N	%
1.00	295	23.1
1.33	7	0.5
1.67	7	0.5
2.00	968	75.8
TOTAL	1389	100.0

SECTION IV

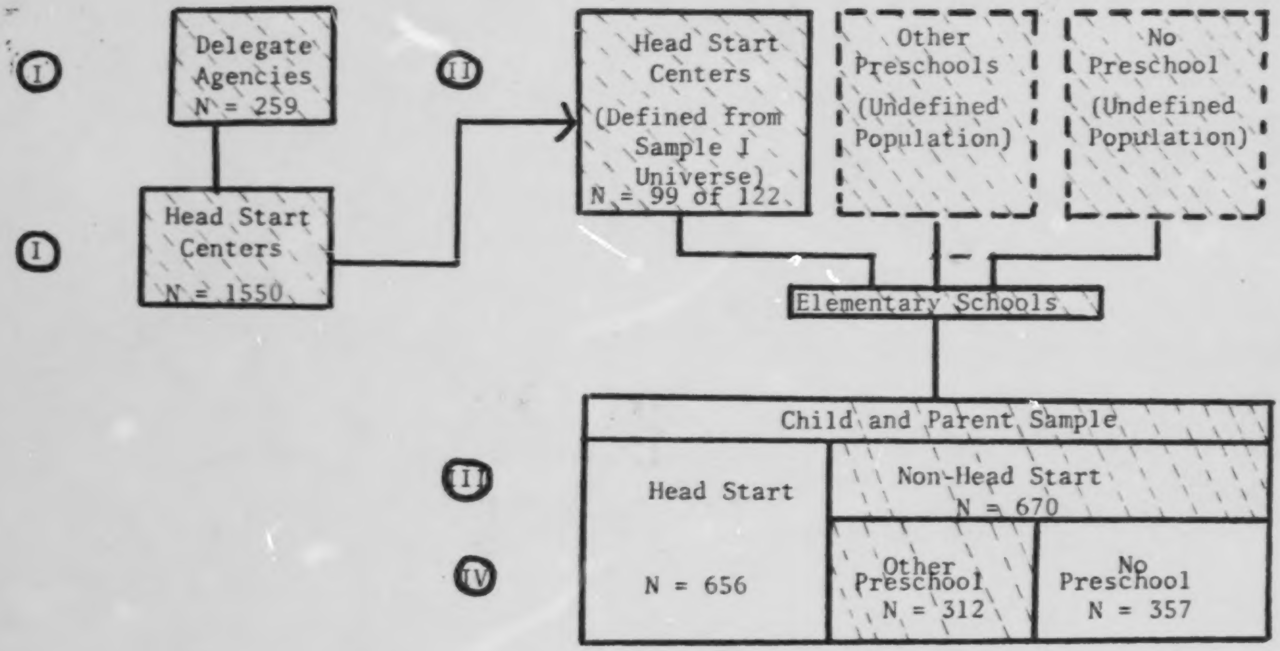
In this final section of the report, we present the analyses of Head Start benefits to children. In Chapter Seven we describe the background sources of variation in the social competence of Head Start graduates. Chapter Eight contains a comparison of Head Start graduates to their peers at entry to elementary school.

SAMPLE I:

Delegate Agencies

SAMPLE II:

Children and Parents



I
Delegate Agencies N = 259
I
Head Start Centers N = 1550
II
Head Start Centers (Defined from Sample I Universe) N = 99 of 122
Other Preschools (Undefined Population)
No Preschool (Undefined Population)
Elementary Schools
Child and Parent Sample
III
IV
Head Start N = 656
Non-Head Start N = 670
Other Preschool N = 312
No Preschool N = 357

INSTRUMENT SET

I. Delegate Agency Survey
II. Head Start Center Questionnaire
III. Parent Interview
IV. Child Test Battery

CHAPTER SEVEN

A DESCRIPTION OF SOCIAL COMPETENCE IN HEAD START GRADUATES

7.0 INTRODUCTION

The purpose of the analyses reported in this section was to determine what type of demographic and home environmental conditions are associated with different aspects of the Head Start graduate's social competence as measured in the first year of elementary school. As a preliminary step to this analysis, we report a detailed description of the Head Start sample in order to gain a better understanding of how different types of children in Head Start are distributed across different types of families. The logic of a single-time-point survey precludes definitive conclusions about what conditions "cause" which kinds of performance. However, the results of such a descriptive study not only provide an indication of the status of Head Start graduates' social competence, but they also identify areas of child performance and domains of background conditions which deserve more detailed, systematic study in the future.

7.1 CHARACTERISTICS OF HEAD START GRADUATES

The group of Head Start graduates described here represent a fortuitous quota sample of children whose parents responded affirmatively to a written request that their child be allowed to participate in the study. The sampling procedures ensured that the Head Start centers were representative of Project Head Start centers as a whole. However, because of the vagaries in obtaining affirmative responses from Head Start parents, the child sample cannot be viewed as representative of the national population of Head Start children. However, where possible, the characteristics of the Head Start group on ethnic type, sex, age, mother's education, family income, family size and family composition will be compared to other national sources to explore their representativeness. At the outset of this study, little was known about the distribution of Head Start children and families across the country. The data presented here not only characterize the sample with respect to the current analysis, but also provide a point of reference for future data from a Head Start information management system. In addition, these data allow comparisons of the current sample with previous studies of Head Start.

7.1.1 Ethnic Type and Sex Distribution

Table 7.1 indicates the numbers and proportions of the sample for ethnic and sex types. The "Other" category includes Native American, Asian and very small percentages of other European-bilingual groups. Due to several problems in data collection, the sex type of children of a portion of the sample was not unambiguously recorded. Rather than delete these children from subsequent analyses of sex differences, their status as "unidentified" was coded and included in the subsequent analysis. Thus, the sample description includes their characteristics.

The distribution of Blacks and Whites in this sample closely resembles that reported for Project Head Start as a whole between 1971 and 1973. The national percentages of Blacks and Whites ranged from 46.8% to 48.4%, and from 34% to 36.1% respectively during that period. The present sample includes 46.2% Blacks and 36.9% Whites. Hispanics are somewhat underrepresented in this survey (9.6%) compared to the national reports ranging between 14.6% and 14.9%,* while the "Other" category is overrepresented (7.3%) compared to the national reports (2.5% to 2.8%). Since Blacks and Whites comprise over 80% of both this sample and the national Head Start population, we may conclude that the ethnic distribution of the current sample is largely representative of Project Head Start. Of the children with recorded sex information, the distribution slightly favors females (53.3%) compared to males (46.7%).

7.1.2 Age Distribution

Child's age was calculated as of December, 1976 from birth information on the Parent Interview. For a proportion of Head Start graduates, their first elementary school classes are first grade rather than kindergarten. Since this difference appears in this sample as a regional condition, the ethnic distributions of age are presented in Table 7.2 by region. Age data for regions clearly show that the older children are in the southeast. Assuming school entry in September, the regional mean ages indicate that the kindergarten children had a mean age of 5 years-4 months to 5 years-6 months, while the first grade children had a mean age of 6 years-3 months

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*The sampling plan made an effort to "select out" all programs in which English was not the primary language.

Table 7.1

Sex and Ethnic distribution of
Head Start sample.

```
                    COUNT   I
                  ROW PCT   IBLACK     WHITE     HISPANIC OTHER        ROW
                  COL PCT   I                                          TOTAL
                  TOT PCT   I       1  I       2  I       3  I      4  I
                  --------I--------I--------I--------I--------I
                        1   I    108   I     84   I     22   I     13  I    227
MALE                        I   47.6   I   37.0   I    9.7   I    5.7  I   34.6
                            I   35.6   I   34.7   I   34.9   I   27.1  I
                            I   16.5   I   12.8   I    3.4   I    2.0  I
                           -I--------I--------I--------I--------I
                        2   I    129   I     78   I     33   I     19  I    259
FEMALE                      I   49.8   I   30.1   I   12.7   I    7.3  I   39.5
                            I   42.6   I   32.2   I   52.4   I   39.6  I
                            I   19.7   I   11.9   I    5.0   I    2.9  I
                           -I--------I--------I--------I--------I
                        4   I     66   I     80   I      8   I     16  I    170
MISSING SEX INFO            I   38.8   I   47.1   I    4.7   I    9.4  I   25.9
                            I   21.8   I   33.1   I   12.7   I   33.3  I
                            I   10.1   I   12.2   I    1.2   I    2.4  I
                           -I--------I--------I--------I--------I
                   COLUMN        303        242         63         48       656
                    TOTAL       46.2       36.9        9.6        7.3     100.0
```

Table 7.2

Age distribution of Head Start sample by geographic region.

```
            MEAN I
           COUNT I  BLACK       WHITE       HISPANIC   OTHER         ROW
         STD DEV I                                                   TOTAL
                 I        1  I        2  I        3  I        4  I
        ---------I-----------I-----------I-----------I-----------I
               1 I   66.875  I   68.526  I   67.625  I   65.818  I   67.738
 NORTHEAST       I       56  I      116  I        8  I       22  I      202
                 I    3.913  I    5.671  I    5.655  I    3.875  I    5.123
                -I-----------I-----------I-----------I-----------I
               2 I   77.882  I   80.667  I        0  I   77.625  I   78.190
 SOUTHEAST       I      178  I       24  I        0  I        8  I      210
                 I    6.892  I    5.954  I        0  I    3.543  I    6.734
                -I-----------I-----------I-----------I-----------I
               3 I   64.200  I   67.733  I   72.653  I   64.333  I   68.784
 SOUTHWEST       I       35  I       15  I       49  I        3  I      102
                 I    5.960  I    3.348  I    5.725  I    4.509  I    6.692
                -I-----------I-----------I-----------I-----------I
               4 I   67.103  I   70.217  I   74.400  I   68.467  I   69.530
 WEST            I       29  I       83  I        5  I       15  I      132
                 I    4.254  I    5.908  I    8.385  I    4.033  I    5.683
                -I-----------I-----------I-----------I-----------I
    COLUMN TOTAL     73.758      70.311      72.145      68.521      71.667
                        298         238          62          48         646
                      8.413       6.680       6.113       5.739       7.575

NUMBER OF MISSING OBSERVATIONS =        10
```

Note: Data are missing due to the fact that not all children received all tests, or that parents failed to respond to certain items. The incidence of missing data is included to alert the reader to the minor variations in numbers associated with any given table.

at school entry. Differences in mean age between Blacks and Whites are largely attributable to their disproportionate distributions across regions. Within region, the Whites' age mean tends to be about two months higher than the Black mean.

7.1.3 Mother's Education

The mean number of years of schooling for mothers, as reported in the Parent Interview, is indicated for ethnic groups in Table 7.3 . An additional set of categories is provided to illustrate education level within three types of educational experience: Less than high school diploma; High school graduates; and those with schooling beyond the high school level. For Blacks, Whites and Hispanics, the proportions of high school graduate mothers are 41%, 43% and 47% respectively. For less than high school diploma, the respective proportions of these three groups are 52%, 42% and 42%. Thus, while all ethnic groups have roughly similar incidences of high school graduates, the Black group tends to have a slightly higher incidence of non-graduates, with the correspondingly lower proportion of those having education beyond high school. Within educational categories, the mean number of years of schooling do not vary greatly across ethnic types.

Number of years of schooling is a useful index of many educationally-relevant characteristics of the home environmental and attitudinal climate. Thus, it is typically used as a predictor or covariate in studies of child school performance. In addition, however, the conditions of employment and status in society at large impose a meaning upon educational level which corresponds roughly with the distinctions of diploma and degrees. In the descriptive analysis reported later in this section, we have chosen to analyze educational level according to these categories rather than simply according to the number of years of schooling, since these categories represent not only the level of education information within the home environment, but also the valence conferred on different degrees of education by society.

7.1.4 Family Income and Composition

The information on family income (Table 7.4) is presented separately for different categories of family composition and employment. These categories provide an approximate indication of how many adults are in the household,

Table 7.3

Distribution of mother's education
at three levels of education
within Head Start sample.

```
            MEAN I
           COUNT I  BLACK       WHITE       HISPANIC    OTHER             ROW
         STD DEV I                                                        TOTAL
                 I        1 I         2 I         3 I         4 I
        ---------I----------I-----------I-----------I-----------I
               1 I    9.058 I     9.455 I     8.077 I     9.563 I     9.132
LESS THAN DIPLOM I      155 I        99 I        26 I        16 I       296
                 I    1.629 I     1.380 I     2.096 I     1.413 I     1.624
                -I----------I-----------I-----------I-----------I
               2 I   12.000 I    12.000 I    12.000 I    12.000 I    12.000
HI SCHOOL DIPLOM I      122 I       101 I        29 I        26 I       278
                 I        0 I         0 I         0 I         0 I         0
                -I----------I-----------I-----------I-----------I
               3 I   14.684 I    14.758 I    14.333 I    13.800 I    14.619
MORE THAN   HI S I       19 I        33 I         6 I         5 I        63
                 I    1.293 I     1.415 I      .816 I      .837 I     1.300
                -I----------I-----------I-----------I-----------I
   COLUMN TOTAL      10.632      11.309      10.557      11.362      10.926
                        296         233          61          47         637
                      2.149       2.109       2.643       1.647       2.177

NUMBER OF MISSING OBSERVATIONS =       19
```

Table 7.4

Distribution of family income across categories of family employment status within Head Start sample.

```
    MEAN I
   COUNT I  BLACK        WHITE        HISPANIC    OTHER             ROW
 STD DEV I                                                          TOTAL
         I         1 I          2 I          3 I          4 I
---------I-----------I-----------I-----------I-----------I
       1 I     2.979 I     3.889 I     4.250 I     4.125 I     3.465
SINGLE,NO WORK  I  56 I        44 I          3 I         10 I       113
         I     1.476 I     1.274 I     2.462 I     1.599 I     1.499
        -I-----------I-----------I-----------I-----------I
       2 I     4.441 I     4.823 I     6.920 I     2.850 I     4.770
SINGLE,WORKING  I  16 I        15 I          3 I          1 I        35
         I     2.275 I     2.869 I     2.656 I          0 I     2.578
        -I-----------I-----------I-----------I-----------I
       3 I     5.046 I     6.079 I     5.133 I     5.420 I     5.534
2 ADULTS,NO WORK I 12 I        14 I          3 I          5 I        34
         I     2.757 I     2.902 I     3.486 I     5.276 I     3.192
        -I-----------I-----------I-----------I-----------I
       4 I     5.253 I     7.789 I     7.481 I     5.058 I     6.662
2 ADULTS,1 WORKI I 50 I        68 I         16 I         12 I       146
         I     3.001 I     3.699 I     2.773 I     3.116 I     3.530
        -I-----------I-----------I-----------I-----------I
       5 I     7.255 I     9.614 I     8.889 I     8.410 I     8.592
2 ADULTS,2 WORKI I 53 I        47 I         18 I         10 I       128
         I     3.762 I     3.926 I     2.670 I     3.980 I     3.788
        -I-----------I-----------I-----------I-----------I
       6 I     7.051 I     7.905 I     6.757 I     4.150 I     7.204
MORE THAN 2 ADUL I 59 I        24 I          7 I          2 I        92
         I     4.071 I     4.081 I     3.623 I     1.838 I     4.008
        -I-----------I-----------I-----------I-----------I
   COLUMN TOTAL        5.299       7.093       7.517       5.622       6.354
                         246         212          50          40         548
                       3.593       3.902       3.044       3.604       3.747

NUMBER OF MISSING OBSERVATIONS =        108
```

how many contribute to family income through employment and, by inference, how many are available for continual child contact in the home. Without more detailed information, these categories must be seen only as crude indicators of income-producing time and direct child care time available in the home. Nevertheless, these data do suggest a number of interpretable patterns.

Clearly, the single, unemployed parent has the least financial resources, while two employed adults provide the greatest income for the household. This pattern generally characterizes all ethnic groups. In addition, the single working parent appears to provide less income than a household of two adults with one working. This difference may be attributable in part to the fact that most single working parents are women, whereas most adult-one working households have male breadwinners with somewhat higher-paying jobs. In addition, employed mothers, as single parents, may tend to hold more part time jobs. When there are more than two adults in the home, they do not contribute significant additional income. By inference, additional adults in the home may be unemployed, therefore potentially available for direct child contact at home. The status of two adults-neither working is not clear; however, since they report household incomes slightly higher than the single working parent, they presumably are receiving retirement, unemployment or welfare benefits.

With respect to ethnic differences, it can be seen that Blacks are about equally distributed across the single-unemployed, two adult (both working and single working) and multiple adults categories. About one-third of the Whites are in the two adult-one working category, with smaller proportions in the single-unemployed and two adult-both working categories. For both Blacks and Whites, the single-working and two adult-unemployed categories are smallest. Although the Hispanic sample is rather small they are most represented by the two adult-one or both working categories. Blacks have lower incomes than Whites or Hispanics, even in the unemployed categories where income derives from various social programs.

One note of precaution is in order for interpreting the levels of household income reported here. Head Start eligibility is determined on sources of income exclusive of welfare payments, whereas the data reported here include all forms of income. Thus, the levels of income are higher by some indeterminate amount than those reported for assigning Head Start eligibility.

7.1.5 Family Size

The data on family size in Table 7.5 indicate that the modal size of Head Start families is 4 persons. Blacks and Hispanics tend to have slightly larger families than Whites, with modal values of 5 and 6 respectively. The relationship of family income to family size is indicated in Table 7.6. These data suggest that household income increases significantly with increases in family size up to about 4 or 5 members. However, families numbering between 4 and 8 members have available about the same amount of financial resources. The small proportion of families numbering greater than 9 persons have available somewhat more income. At each level of family size from 3 to 9, Blacks report lower mean incomes than Whites and Hispanics.

7.2 MEASURES OF SOCIAL COMPETENCE

The measurement objective of this study was to assess the social competence of Head Start graduates in the school setting. The term "social competence" has grown in usage recently, and in the process has acquired a variety of definitions. A recent study from Rand Corporation (Raizen, Bobrow, et al., 1974) set forth an extremely detailed definition of all aspects of social competence, including indicators of health, nutrition, perceptual-motor functioning, cognitive, social, and language performance. Other recent investigators (e.g., White, 1973) have labelled as "executive skills" those behaviors of preschool children through which they acquire information and manage other playmates successfully in the pursuit of their various desires. Ogilvie (1969) has emphasized the importance not only of identifying positive, socially adaptive behaviors, but also of identifying immature or regressive behaviors, since social competence is by nature so multifaceted. In competing (or cooperating) socially, children display a wide range of behaviors. What for one may be aggressive contention, for another child appears as productive assertiveness; or, in another case, emotional dependence in one child may in another child be seen as sociability and the productive use of adults. Thus, such child behaviors may have different meanings to different observers in different sub-cultural contexts.

Given the potentially wide scope of measures for social competence, in the face of practical limits of time and finances for the current study, we elected to focus our definition of social competence on the child's adaptation to and performance in the school environment. Programs such

Table 7.5

Family Size Distribution of Head Start Sample

COUNT ROW PCT COL PCT TOT PCT	BLACK 1.	WHITE 2.	HISPANIC 3.	OTHER 4.	ROW TOTAL
2.	8	11	1	3	23
	34.8	47.8	4.3	13.0	3.5
	2.6	4.5	1.6	6.3	
	1.2	1.7	.2	.5	
3.	33	37	11	4	85
	38.8	43.5	12.9	4.7	13.0
	10.9	15.3	17.5	8.3	
	5.0	5.6	1.7	.6	
4.	55	65	12	15	147
	37.4	44.2	8.2	10.2	22.4
	18.2	26.9	19.0	31.3	
	8.4	9.9	1.8	2.3	
5.	59	60	12	8	139
	42.4	43.2	8.6	5.8	21.2
	19.5	24.8	19.0	16.7	
	9.0	9.1	1.8	1.2	
6.	44	32	14	[illegible]	98
	44.9	32.7	14.3	8.2	14.9
	14.5	13.2	22.2	16.7	
	6.7	4.9	2.1	1.2	
7.	32	19	2	7	60
	53.3	31.7	3.3	11.7	9.1
	10.6	7.9	3.2	14.6	
	4.9	2.9	.3	1.1	
8.	20	11	3	2	36
	55.6	30.6	8.3	5.6	5.5
	6.6	4.5	4.8	4.2	
	3.0	1.7	.5	.3	
9.	17	3	3	1	24
	70.8	12.5	12.5	4.2	3.7
	5.6	1.2	4.8	2.1	
	2.6	.5	.5	.2	
10. 10 OR MORE	35	4	4	0	43
	81.4	9.3	9.3	0	6.6
	11.6	1.7	6.3	0	
	5.3	.6	.6	0	
COLUMN TOTAL	303 46.2	242 36.9	63 9.6	48 7.3	656 100.0

Table 7.6

Distribution of family income across levels of family size within Head Start sample.
(income in thousands of dollars)

MEAN COUNT STD DEV	BLACK 1	WHITE 2	HISPANIC 3	OTHER 4	ROW TOTAL
2	3.521	3.555	0	9.650	4.152
	7	11	0	2	20
	2.535	2.058	0	7.566	3.287
3	3.987	5.662	5.791	2.747	5.099
	27	37	11	4	79
	3.139	3.519	2.523	1.699	3.346
4	5.284	7.614	7.106	8.246	6.763
	49	57	11	13	130
	3.824	4.296	3.912	4.660	4.249
5	5.529	7.0[illegible]9	9.750	3.8[illegible]1	6.317
	50	51	7	8	116
	3.162	3.536	3.016	1.922	3.468
6	5.866	7.197	8.175	5.408	6.607
	37	29	11	6	83
	3.372	3.690	2.501	2.163	3.392
7	5.092	8.431	[illegible].450	4.464	6.470
	26	18	1	7	52
	3.610	3.015	0	1.920	3.477
8	4.834	7.5[illegible]0	5.017	6.775	5.934
	16	10	3	2	31
	3.376	4.431	1.809	1.874	3.665
9	6.313	12.017	7.833	4.300	7.207
	15	3	3	1	22
	3.302	3.940	.462	0	3.620
10 10 OR MORE	7.352	9.175	5.225	0	7.319
	29	4	4	0	37
	4.217	2.930	3.705	0	4.070
COLUMN TOTAL	5.[illegible]39	7.0[illegible]7	7.452	5.806	6.309
	256	220	51	43	570
	2.574	3.864	3.037	3.764	3.733

as Head Start are intended to assist the family and the whole child, but the program components of health, family and social services may be seen ultimately as support systems for the child's adaptation to school, and, thereby, later to the larger society. This is not to say, however, that the child's academic performance is the sole criterion of social competence in the school. The current study attempted to assess the following aspects of social competence in the schools: Academic skills; motivational interest and persistence; prosocial adaptive behaviors; unsocial, regressive behaviors; and dependency behaviors. The measurement plan provided for one other feature -- each of the domains should be assessed through multiple, at least two sources; e.g. from child responses and from teacher reports. To the extent that different measures converge within the same domain, we gain more confidence in the meaning of both measures. To the extent that such measures do not correspond, we must suspect at least the psychometric properties of the measures. Given satisfactory measurement characteristics, we must proceed to examine the meaning of the measures separately for each instrument. Table 7.7 gives a summary of the study measures within each of the domains and methods of measurement. The psychometric properties of these measures are reported in the Appendix.

7.3 DESCRIPTIVE ANALYSIS OF CHILD SOCIAL COMPETENCE

7.3.1 Method

The purpose of this analysis, once again, was to describe the performance levels of Head Start graduates on a variety of measures of social competence, and to examine the concomitants of variation in these scores from the child's family background. The specific values of group means reported here are not directly interpretable by themselves without some benchmark of meaning. For some of these measures, the sample values may be compared to other studies using the same instruments, such as Project Follow Through national evaluation, the Home Start evaluation, or the ETS Head Start Longitudinal Study. Chapter 8 of this report

Table 7.7

Measures of social competence in the school setting according to domain and method of assessment

DOMAIN OF MEASUREMENT	METHOD OF MEASUREMENT Child Response	 Teacher Report
Academic	Wide Range Achievement Test	(1) Pupil's academic potential
Prosocial adaptive behaviors	(2) Sociability Conformity (3) Friends named	(1) Extroversion Popularity
Unsocial, regressive behaviors	(2) Asocial Me First	(4) Aggression (1) Hostility
Motivational orientation	(2) Academic Motivation (5) Absence from school	(1) Task orientation (4) Autonomous achievement striving
Dependency behaviors	(2) Closeness to adults	(4) Child dependency Adult dependency Dependency conflict

Notes: (1) Schaefer Classroom Behavior Inventory
(2) Values Inventory for Children
(3) Child interview question, "Name your friends."
(4) Beller Rating Scales
(5) Absence from school recorded by teacher

provides another benchmark in the comparison of Head Start graduates' scores with their classmates who remained at home prior to school entry.

The interpretive framework for the data reported here is the demographic status and attitudinal characteristics of the child's home. The meaning of social competence measures becomes clearer when we can describe the home conditions with which they correlate, and future studies can become more productive to the extent that they include such conditions in their examination of educational program effects on children.

The list of background and home conditions considered in the current analysis is outlined in Table 7.8. These variables were selected to represent different types of influences typically associated with studies of child test performance. These descriptive variables fall into roughly three categories:

- Characteristics of the child
  Age, sex, ethnic type, school entering grade
- Socio-economic status descriptors of the home
  Income, mother's education, family composition, family size
- Parent-child interactions and attitudes with respect to education

The objective of the descriptive analysis was to determine whether and to what extent these different sources of variation are associated with different domains of child performance. To accomplish this objective, the child scores were regressed on the set of descriptive variables. The child set of descriptors was included first in the regression equation, followed by the home background descriptors. (Ethnicity was treated here as a characteristic of the family as a whole.) The attitudinal variables were included as the last set. The specific coding of the terms in the regression model is indicated in Table 7.8.

The results of these analyses are reported in Table 7.9, together with the means and standard deviations of the outcome measures. For those descriptor variables which produced regression coefficients significant at or beyond the .05 level of significance, the standardized regression coefficient appears in Table 7.9. These coefficients indicate the proportion of standard deviation change in the descriptor variable, all other variables being held constant. A table of all coefficients is reported in the Appendix.

Table 7.8

DEFINITION OF DEMOGRAPHIC AND HOME BACKGROUND REGRESSION MODEL

Order of inclusion in hierarchy	Variable	Definition
1.	Entering grade	1=first grade; 0=kindergarten
2.	Child's age	In months
3.	Child's sex (a)	1 = male; 0 = female or missing
	Missing Sex Information (b)	1 = missing; 0 = male, female data
4.	Mother's education(a)	1 = Schooling beyond high school; 0 = High School non-graduate
	Mother's education(b)	1 = High school diploma only; 0 = high school non-graduate
5.	Family composition	1 = Two or more adults in home; 0 = Single adult in home
6.	Family size	Total number of persons in home
7.	Income	Total household income
8.	Missing SES data	Coded value increases with each of the following missing datum: education, family composition, family size, income.
9.	Child ethnicity (a)	Black vs all other types
	Child ethnicity (b)	Hispanic vs all others
	Child ethnicity (c)	Native American, asian, other vs all others
10.	Parent locus of control	1 = internal; 0 = external
11.	Satisfaction with child's schooling	(See parent report section for definition of attitude factors)
	Verbal exposure in home.	
	Educational expectations for child	
	Educational need to avoid failure.	
	School alienation	

In addition, two multiple correlation coefficients are indicated in Table 7.9. The first refers to the variance accounted for by all demographic factors in addition to the demographics. An inspection of these percentages indicates those aspects of the child's social competence which are significantly related to parent attitudes, independent of the typical socio-economic status variables.

One final note of explanation for Table 7.9. Not all child measures have been reported. Two criteria were used to simplify the presentation of the descriptive regression results. First, a variable reduction procedure was conducted on the child measures to identify clusters of similarly-related scores. The results of this principle components analysis are reported in the Appendix. In brief, the following types of clusters were obtained:

I. All academic scores from the WRAT

II. Child's interest in school (from the VIC)

Achievement striving (aggregated from teachers' ratings of Autonomous Achievement Striving, Task Orientation and expectations for the child)

III. Absence

IV. Number of friends named

Extroversion

Popularity

V. Hostility/Aggression (aggregated from teachers' ratings of Hostility and Aggression)

Asocial (from the VIC)

As a second simplification, those variables for which the regression model did not account for significant variance were omitted from Table 7.9. Instead they are reported in the Appendix. For the descriptor variables which accounted for significant variance, breakdowns of group means are provided in the following text to facilitate interpretation.

7.3.2 Regression Results

7.3.2.1 Academic Performance. Analysis of the total Wide Range Achievement Test scores indicated significant correlations with grade level, child's age, mother's education level and child ethnicity. The demographic vari-

Table 7.9

STANDARDIZED REGRESSION COEFFICIENTS OF BACKGROUND DESCRIPTOR VARIABLES FOR CHILD SOCIAL COMPETENCE MEASURES

(N = 584)

	WRAT Total	Interest in School	Achievement Striving	Absence	No. of Friends Named	Extroversion	Popularity	Hostility/Aggression	Asocial
Mean	45.6	22.9	48.1	4.2	2.7	17.0	6.6	17.2	21.9
Standard Deviation	15.3	6.9	8.9	5.1	2.3	3.2	1.5	9.6	8.4
First Grade vs. Kindergarten (Southeast) (Other Regions)	0.32		-0.14		-0.19				
Child									
Age	0.31	0.14			0.15				
Sex (1 = M, 0 = F)					-0.12			0.10	
Sex Missing				0.21		-0.10		0.13	
Mother's Education									
Diploma vs. No Diploma	0.12		0.13						-0.12
Some College vs. No Diploma									
Family Composition									
Multiple Parent vs. Single			0.10				0.18		
Family Size			-0.13				-0.14		
Income						0.12			
Missing SES		-0.14				0.10			
Child Ethnicity									
Black vs. Other	-0.26								
Hispanic vs. Other	0.21	-0.16							
Other vs. Blacks, Whites and Hispanics		-0.17			-0.15				
R	0.52	0.24	0.32	0.29		0.28	0.26	0.22	0.24
R^2	0.27	0.06	0.10	0.08		0.08	0.07	0.05	0.06
Home Learning Climate									
Internal Locus				0.10					
School Satisfaction	0.08		0.16		0.10	0.10			
Verbal Exposure for Child									
Educational Expectations for Child	0.19		0.23			0.11			
Need to Avoid Failure: Education	-0.08			0.12					
School Alienation									
R	0.57	0.28	0.44	0.33		0.33	0.27	0.25	0.27
R^2	0.33	0.08	0.19	0.11		0.11	0.09	0.06	0.07

Table 7.10

Distribution of WIDE RANGE ACHIEVEMENT TEST Scores by Area and Ethnicity for Head Start Sample

```
                MEAN I
               COUNT I  BLACK       WHITE       HISPANIC   OTHER           ROW
             STD DEV I                                                     TOTAL
                     I         1 I         2 I         3 I         4 I
AREA         --------I-----------I-----------I-----------I-----------I
                   1 I   38.735 I    40.563 I    28.500 I    39.750 I     39.432
  NORTHEAST          I       49 I       103 I         8 I        16 I        176
                     I   14.657 I    14.739 I    14.193 I     8.941 I     14.381
                    -I-----------I-----------I-----------I-----------I
                   2 I   52.466 I    55.480 I         0 I    60.625 I     53.184
  SOUTHEAST          I      163 I        25 I         0 I         8 I        196
                     I   14.226 I    10.840 I         0 I    10.822 I     13.701
                    -I-----------I-----------I-----------I-----------I
                   3 I   31.194 I    36.929 I    53.304 I    26.333 I     42.521
  SOUTHWEST          I       31 I        14 I        46 I         3 I         94
                     I   11.467 I     9.417 I    13.431 I    16.653 I     15.766
                    -I-----------I-----------I-----------I-----------I
                   4 I   34.030 I    47.432 I    50.750 I    40.8[illegible] I     44.426
  WEST               I       26 I        74 I         4 I        15 I        119
                     I   13.304 I    13.823 I    15.626 I     8.453 I     13.966
                    -I-----------I-----------I-----------I-----------I
     COLUMN TOTAL        45.956      44.537      40.328      43.143       45.550
                            269         216          58          42          595
                         16.196      14.589      15.652      13.190       15.396

NUMBER OF MISSING OBSERVATIONS =         71
```

ables accounted for 27% of the WRAT variance, R = .52. A breakdown of the achievement scores by region and ethnicity in Table 7.10 indicates that the highest level of scores was obtained in the southeast region. Since the mean age for this group is 78.2 months (as reported in Table 7.2), this difference primarily represents a first grade versus kindergarten contrast. The span of scores across the other three regions with kindergarten level groups is 5 points, while the difference between the first grade group and the closest kindergarten group is about 9 points.

In addition to the grade level difference, there is also an age difference on WRAT scores indicated by the significant increase in scores with age in Table 7.10. This coefficient suggests that there may be an age-within-grade difference on the WRAT scores in addition to the grade difference. This omnibus achievement test is thus quite sensitive to the types of academic skills acquired by children during those early months and in the first year of academic school learning.

The ethnic distribution of scores in Table 7.10 indicates that the Hispanic group has the highest level of WRAT scores. This relatively higher mean is attributable largely to the mean of the Southwest of the Hispanic group. Although the Northeast group has only 8 children identified as Hispanic, mean level is 28.5. It should be noted from Table 7.2 that the mean age for the Southwest cell is about 7 months higher than the mean age of the other ethnic groups in the Southwest. This age difference may in large measure account for the difference in group means in the Southwest.

The other demographic variable indicating a significant relationship to academic achievement was level of mother's education. The means for ethnic groups by categories of mother's education are indicated in Table 7.11. The table shows that the children whose mothers have had some schooling beyond high school average about 6 points (almost one-half standard deviation) higher than the other two groups. Mean scores for the less than high school group and the high school diploma group are essentially equivalent. Mean age differences between these three groups are less than 2 months. Within ethnic groups, the difference between the high school diploma group and the beyond-high school group is smallest (4.2 points) for the White group, intermediate for the Black group (8.3 points) and largest for the Hispanic group (9.5 points). This pattern may be due in part to the age differences between groups within ethnic type.

Table 7.11

Distribution of WIDE RANGE ACHIEVEMENT TEST Scores by Mother's Education and Ethnicity for Head Start Sample

```
          MEAN I
         COUNT I  BLACK        WHITE        HISPANIC   OTHER           ROW
       STD DEV I                                                       TOTAL
               I          1 I          2 I          3 I          4 I
       --------I------------I------------I------------I------------I
             1 I    47.727 I     41.484 I     44.870 I     39.000 I     44.895
LESS THAN DIPLOM I     139 I         91 I         23 I         14 I        267
               I    14.905 I     15.492 I     15.510 I     15.655 I     15.438
              -I------------I------------I------------I------------I
             2 I    43.064 I     42.864 I     50.556 I     45.391 I     45.097
HI SCHOOL DIPLOM I     109 I         88 I         27 I         23 I        247
               I    17.771 I     13.788 I     15.700 I     12.723 I     15.866
              -I------------I------------I------------I------------I
             3 I    51.357 I     54.310 I     60.000 I     45.000 I     51.283
MORE THAN   HI S I      14 I         29 I          6 I          4 I         53
               I    14.872 I     11.545 I     14.269 I      2.160 I     12.619
              -I------------I------------I------------I------------I
   COLUMN TOTAL     45.981       44.567       46.232       43.171       45.586
                       262          208           56           41          567
                    16.306       14.553       15.897       13.353       15.473

NUMBER OF MISSING OBSERVATIONS =        89
```

The WRAT mean for Black children whose mothers have not graduated from high school is higher than for Blacks whose mothers have high school diplomas, and is also higher than the mean of White groups for both these educational categories. This relatively high score may be due largely to the fact that the Black group with mothers of less than high school graduation average about 5 months older than the other cell means.

One further piece of evidence contributes to the potential interest in a closer study of parent attitudes and child achievement. The regression coefficients reported in Table 7.9 indicate that several parent attitudes accounted for 6% additional variance in child achievement beyond the effects of the entire demographic set of descriptors. Parents who report that their children will go farther in school and will perform better in school tend to have children with higher achievement scores at school entry. With a single data-point survey such as the current study, it is not possible to determine a causal relationship between parent expectations and child performance; however, there inevitably exists a reciprocal interaction between parent and child which accounts for this relationship. High parental expectations and confidence in the child may contribute to the child's motivation in school, and higher child achievement may reinforce the parental attitudes.

The small but significant relationship between satisfaction with the child's schooling and child achievement is consistent with the interpretation above. In addition, there is a slightly negative relationship between child academic performance and the parental attitude termed "Educational Need to Avoid Failure". This factor, as discussed in the Parent section of this report, suggests a drive to have children perform well in school more out of a coercion to avoid failure and disappointment than out of confidence and high expectations for the child. Parents with higher scores on this factor tend to have lower incomes, lower levels of education and a more external locus of control. This pattern suggests a different motivational dynamic for learning in the more disenfranchised, alienated segment of the population. A more intensive study of parent-child relationships is needed in order to determine the domains of attitudes and interaction processes which intervention programs may reasonably expect to affect.

7.3.2.2 Motivational Orientation. Three scores are reported in Table 7.9 as indicators of the child's motivational orientation: Interest in School (Academic Motivation) from the child's responses to the Values Inventory for Children; Achievement Striving, the sum of three scores from teacher ratings including Task Orientation, Expectations for the child, and Autonomous Achievement Striving; and absence, the number of days absent from school through December. We recognize that there are many factors affecting school attendance, including the health of the child, family conditions, distance from school and local weather conditions (particularly during the Winter of 1976-77). On the whole, however, a child's or parent's interest in school may tend to a certain extent to overcome a number of such conditions. With a data base which aggregates scores from many different locations under many various conditions, the salience of any single condition will tend to be reduced or compensated by other factors from the country as a whole. The analysis of such data may thus reflect motivational determinants of parents and children under all conditions.

Consider first the Academic Motivation score from the VIC, i.e. the child's interest in school and learning. The regressions in Table 7.9 indicate significant relationships between academic motivation and the child's age and ethnicity, and with the "missing demographic information" code. Older children tend to display higher interest in school. The academic motivation means for ethnic groups across region are shown in Table 7.12. These data suggest that the Hispanics have slightly higher academic motivation scores than the other groups, while the mixed category of Native American, Asian and others has a slightly lower mean than the average. The finding of higher academic motivation scores for Hispanics corresponds to the earlier report above of higher achievement scores for this group. On the whole, however, the regression model accounted for only 6% of the variance in academic motivation scores. Thus, much about the manner in which children respond to the VIC remains to be explained.

The Achievement Striving score from the teacher's ratings was significantly related to a number of background factors, as indicated in Table 7.9. Differences in region/grade level, mother's education, family composition and family size accounted for 10% of the variance in Achievement Striving, while parent expectations for the child and satisfaction

Table 7.12

Distribution of ACADEMIC MOTIVATION Scores by Area and Ethnicity for Head Start Sample

```
            MEAN I
           COUNT I  BLACK        WHITE        HISPANIC    OTHER            ROW
         STD DEV I                                                         TOTAL
                 I       1  I         2  I         3  I         4  I
AREA    ---------I----------I------------I------------I------------I
               1 I  21.556  I    22.588  I    25.429  I    19.167  I    22.068
  NORTHEAST      I      27  I        85  I         7  I        12  I       131
                 I   7.485  I     5.862  I     4.962  I     4.859  I     6.211
                -I----------I------------I------------I------------I
               2 I  23.570  I    22.900  I         0  I    23.143  I    23.454
  SOUTHEAST      I     157  I        10  I         0  I         7  I       174
                 I   6.937  I     6.391  I         0  I     7.448  I     6.862
                -I----------I------------I------------I------------I
               3 I  21.933  I    22.250  I    24.326  I    19.500  I    23.103
  SOUTHWEST      I      30  I        12  I        43  I         2  I        87
                 I   8.179  I     9.421  I     6.718  I     3.536  I     7.597
                -I----------I------------I------------I------------I
               4 I  19.870  I    24.000  I    20.200  I    19.182  I    22.543
  WEST           I      23  I        55  I         5  I        11  I        94
                 I   9.725  I     6.769  I     5.630  I     8.773  I     7.702
                -I----------I------------I------------I------------I
   COLUMN TOTAL     22.650       23.056       24.536       20.062        22.825
                       237          162           55           32           486
                     7.465        6.490        6.369        6.862         7.087

NUMBER OF MISSING OBSERVATIONS =        170
```

with the child's schooling accounted for an additional 9% of the variance, independent of the demographic status descriptors.

The breakdowns in Table 7.13 indicate that the Southeast region mean in Achievement Striving was slightly lower than the overall mean, while the Southwest region had the highest mean. The mean score for Hispanics was higher than the other ethnic groups, as was the case for WRAT and Academic Motivation scores, but this difference failed to reach significance apart from the other group differences in the regression model. A moderate level of ethnic type by region interactions indicates that Whites and Hispanics have higher Achievement Striving ratings in the Southwest, while Blacks have higher ratings than Hispanics or Whites in the Northeast and Southeast regions.

With regard to mother's education, the data in Table 7.14 indicate that the child's Achievement Striving as rated by the teacher increases with the level of schooling acquired by the mother. The difference between the scores for the beyond-high school group and the high school diploma group are greater than the difference between the non-graduate group and the high school diploma group, particularly for Blacks and Hispanics. This interaction pattern is similar to that found between ethnic membership and mother's education groups on the WRAT scores. Whatever the influences of mother's education are on child achievement and motivation, these influences appear stronger for the more highly educated minority families than for similar White majority group families.

The nature of the type of home attitudinal conditions which relate to the child's achievement striving is suggested by the significant regression coefficients for Satisfaction with the Child's Schooling and Educational Expectations for the Child reported in Table 7.9. In the domain of affective measurement, it is surprising to find measures of parent attitudes which account for significant variance in child affective measures, particularly above and beyond the variance accounted for by the typical demographic indicators. In the case of Achievement Striving, as rated by the teacher, the variance accounted for almost doubles when parental attitudes are considered. Once again, the causal direction of this relationship cannot be determined clearly from a single survey measurement. On the one hand, the significant coefficients may simply indicate that parents and teachers agree in their estimates of the child's

Table 7.13

Distribution of ACHIEVEMENT STRIVING Scores
by Area and Ethnicity for Head Start Sample

```
            MEAN I
           COUNT I  BLACK       WHITE       HISPANIC   OTHER          ROW
         STD DEV I                                                    TOTAL
                 I       1  I        2  I        3  I        4  I
AREA    ---------I----------I-----------I-----------I-----------I
               1 I   50.150 I   46.559  I   43.369  I   44.258  I   47.116
  NORTHEAST      I       35 I       99  I        6  I       10  I     150
                 I    8.764 I    8.512  I   12.844  I    7.976  I    8.831
                -I----------I-----------I-----------I-----------I
               2 I   47.169 I   43.236  I        0  I   48.051  I   46.697
  SOUTHEAST      I      131 I       21  I        0  I        8  I     160
                 I    8.899 I    7.295  I        0  I   10.881  I    8.868
                -I----------I-----------I-----------I-----------I
               3 I   46.997 I   56.286  I   52.970  I   54.734  I   51.446
  SOUTHWEST      I       29 I       13  I       39  I        2  I      83
                 I    9.638 I    7.129  I    9.615  I   11.343  I    9.780
                -I----------I-----------I-----------I-----------I
               4 I   48.707 I   49.182  I   49.937  I   47.471  I   48.921
  WEST           I       20 I       70  I        2  I       11  I     103
                 I    7.653 I    7.887  I     .517  I    7.461  I    7.656
                -I----------I-----------I-----------I-----------I
     COLUMN TOTAL    47.774     47.743      51.615      47.054       48.080
                        215        203          47          31          496
                      8.893      9.538      10.240       8.727        8.920

NUMBER OF MISSING OBSERVATIONS =        160
```

Table 7.14

Distribution of ACHIEVEMENT STRIVING Scores by Mother's Education and Ethnicity for Head Start Sample

```
          MEAN I
         COUNT I  BLACK        WHITE        HISPANIC    OTHER            ROW
       STD DEV I                                                         TOTAL
               I        1  I        2  I        3  I        4  I
      ---------I-----------I-----------I-----------I-----------I
             1 I   46.434  I   46.304  I   51.906  I   46.891  I   46.837
LESS THAN DIPLOM I    111  I       87  I       18  I        9  I      225
               I    8.580  I    8.871  I    9.890  I    9.826  I    8.916
              -I-----------I-----------I-----------I-----------I
             2 I   48.036  I   46.144  I   52.519  I   46.907  I   48.238
HI SCHOOL DIPLOM I     87  I       83  I       23  I       21  I      214
               I    9.137  I    8.179  I    9.674  I    8.658  I    8.776
              -I-----------I-----------I-----------I-----------I
             3 I   52.369  I   57.344  I   50.933  I   50.556  I   52.866
MORE THAN   HI S I     12  I       25  I        5  I        1  I       43
               I    5.414  I    8.151  I    8.068  I        0  I    7.968
              -I-----------I-----------I-----------I-----------I
   COLUMN TOTAL    47.604      47.685      52.085      47.024      47.997
                      210         195          46          31         482
                    9.883       8.557       9.828       8.727       8.919

NUMBER OF MISSING OBSERVATIONS =          174
```

motivational orientation. On the other hand, it may be that the Satisfaction and Expectation factors measured in the Parent Interview are indicators of other important, though unmeasured, processes through which parents support their child's adaptation to the school. If such is the case, and if such parental attitudes and interactions can be identified, then intervention programs directed toward these characteristics of the parents may be expected to demonstrate some measure of impact on the child as well as upon subsequent children in the family.

Two other demographic indicators related significantly to Achievement Striving -- family composition and family size. The breakdown of Achievement Striving by family size in Table 7.15 indicates that children from smaller families tend to have higher scores, particularly singleton children. With some minor variations, this pattern is true for all ethnic types. It may be that family size is an indirect indicator of the intensity of parent-child contact and interaction. Further studies of this relationship should consider the potential effects of parenting, time, birth order, sibling interactions and social expectations as determinants of Achievement Striving.

The regression coefficient for family composition in Table 7.9 indicates that children from single-parent homes tend to have lower Achievement Striving ratings from teachers than do children from homes with two or more adults. A closer inspection of this relationship is provided in Table 7.16 where the family composition categories are defined not only by number of adults present, but also by the employment status of these adults. Although on the whole the single parent children had lower Achievement Striving, this appears true in Table 7.16 only for children with unemployed single parents. In fact, the mean for children with a single working parent is slightly higher than the means for children with two parents where they are both unemployed or one is employed. Where two parents are both employed, the children have the highest Achievement Striving ratings. These group differences are not large, but they may suggest that the type of parental motivations which contribute to employment also contribute to the child's Achievement Striving in school.

The regression analysis of the Absence data indicates only one significant descriptor in the demographic set — the "missing sex information" code. For reasons not clear, those children on whom sex data were not recorded tended to be absent more days from school. This phenom-

Table 7.15

Distribution of ACHIEVEMENT STRIVING Scores
by Family Size and Ethnicity for Head Start Sample

```
    MEAN I
   COUNT I  BLACK       WHITE       HISPANIC    OTHER            ROW
 STD DEV I                                                       TOTAL
         I        1  I        2  I        3  I        4  I
---------I-----------I-----------I-----------I-----------I
       2 I   54.500  I   50.777  I   54.449  I   44.745  I       51.452
         I        5  I        8  I        1  I        2  I           16
         I    7.640  I    7.781  I        0  I   14.011  I        8.191
        -I-----------I-----------I-----------I-----------I
       3 I   49.375  I   47.965  I   53.426  I   44.993  I       49.016
         I       23  I       32  I        8  I        2  I           65
         I    7.821  I    8.129  I    9.361  I    5.818  I        8.184
        -I-----------I-----------I-----------I-----------I
       4 I   49.052  I   50.289  I   53.815  I   45.475  I       49.658
         I       40  I       54  I        9  I       11  I          114
         I    8.961  I    7.892  I    8.276  I    8.880  I        8.495
        -I-----------I-----------I-----------I-----------I
       5 I   49.682  I   43.916  I   50.749  I   41.948  I       46.736
         I       40  I       47  I       10  I        6  I          103
         I   10.293  I    6.048  I   11.222  I    7.226  I        9.269
        -I-----------I-----------I-----------I-----------I
       6 I   44.294  I   46.935  I   50.380  I   47.606  I       46.318
         I       34  I       27  I       11  I        5  I           77
         I    8.370  I    9.983  I   10.733  I    5.547  I        9.261
        -I-----------I-----------I-----------I-----------I
       7 I   47.291  I   46.260  I   44.373  I   56.100  I       48.531
         I       23  I       19  I        2  I        3  I           47
         I    8.651  I    9.341  I   19.126  I    6.142  I        9.225
        -I-----------I-----------I-----------I-----------I
       8 I   49.056  I   46.440  I   63.247  I   62.715  I       49.162
         I       16  I       10  I        1  I        1  I           28
         I    8.652  I   10.478  I        0  I        0  I        9.755
        -I-----------I-----------I-----------I-----------I
       9 I   45.137  I   59.229  I   40.801  I   57.375  I       47.836
         I       12  I        3  I        2  I        1  I           18
         I    8.373  I    1.560  I   11.909  I        0  I        8.439
        -I-----------I-----------I-----------I-----------I
      10 I   45.370  I   47.555  I   48.217  I        0  I       45.862
10 OR MORE          I       22  I        3  I        3  I        0  I           28
         I    7.919  I   11.384  I   15.802  I        0  I        8.221
        -I-----------I-----------I-----------I-----------I
COLUMN TOTAL  47.774      47.743      51.615      47.054           48.080
                215         203          47          31              496
              8.883       8.538      10.240       8.727            8.920

NUMBER OF MISSING OBSERVATIONS =        160
```

Table 7.16

Distribution of ACHIEVEMENT STRIVING Scores by Employment, Family Composition and Ethnicity for Head Start Sample

```
           MEAN I
          COUNT I  BLACK       WHITE       HISPANIC   OTHER             ROW
        STD DEV I                                                       TOTAL
                I       1  I       2  I       3  I        4  I
        --------I----------I----------I----------I-----------I
              1 I   46.107 I   45.123 I   60.363 I   43.815 I    45.863
SINGLE,NO WORK  I       50 I       39 I        2 I        6 I        97
                I    8.991 I    7.893 I    2.744 I    7.468 I     8.555
               -I----------I----------I----------I-----------I
              2 I   48.924 I   49.150 I   45.386 I   40.889 I    48.006
SINGLE,WORKING  I       14 I       14 I        3 I        1 I        32
                I   10.514 I    9.063 I    7.879 I        0 I     9.356
               -I----------I----------I----------I-----------I
              3 I   47.243 I   46.813 I   54.596 I   45.931 I    47.492
2 ADULTS,NO WORK I      11 I       10 I        2 I        3 I        26
                I    6.998 I    8.195 I    6.300 I   15.646 I     8.338
               -I----------I----------I----------I-----------I
              4 I   47.855 I   47.529 I   47.202 I   48.445 I    47.686
2 ADULTS,1 WORKI I      41 I       67 I       13 I       13 I       134
                I    9.381 I    9.676 I   13.410 I    7.006 I     9.685
               -I----------I----------I----------I-----------I
              5 I   49.006 I   49.898 I   51.539 I   44.780 I    49.558
2 ADULTS,2 WORKI I      35 I       43 I       12 I        4 I        94
                I    9.065 I    7.464 I    7.609 I    8.621 I     8.136
               -I----------I----------I----------I-----------I
              6 I   48.569 I   47.797 I   53.947 I   62.775 I    49.165
MORE THAN 2 ADUL I      56 I       24 I       11 I        1 I        92
                I    8.603 I    8.332 I    9.861 I        0 I     8.858
               -I----------I----------I----------I-----------I
   COLUMN TOTAL     47.860     47.610     50.967     46.901       47.981
                       207        197         43         28          475
                     9.955      8.625     10.375      8.585        8.961

NUMBER OF MISSING OBSERVATIONS =        181
```

enon is most easily interpreted as reflecting problems specific to the data collection. Absence does not appear to be systematically related in the Head Start population to basic SES and child characteristics. On the other hand, the set of parent attitudinal factors accounts for some small but significant variance in absence independent of demographic status. These relationships provide some indirect support for the interpretation of absence as an indicator of motivational conditions. There is a tendency for children who are absent from school more frequently to have parents who indicate higher levels of the need to avoid educational failure. In addition, there is a slight relationship with parent locus of control. Children with parents who have a more internal locus of control tend to be absent more from school. The combination of both these factors relating positively to absence is peculiar, inasmuch as the factors correlate negatively with each other. The nature of this relationship to absence remains for further analyses to explicate.

7.3.2.3 Prosocial, Adaptive Behavior

Three measures in this domain are reported in Table 7.9: number of friends named, a child-response measure to the question "Name your friends in the class"; Extroversion, a rating by the teacher of the extent to which the child is out-going and readily joining in with the activities of others; and Popularity, a rating by the teacher of the extent to which the child appears liked by others and not rejected or ignored. The variance accounted for by the demographic descriptors in all three measures is relatively low, ranging from 5% to 8%. On the rating of Extroversion, the parent attitudinal factors accounted for additional variance beyond the demographic indicators.

On number of friends named, the regression analysis indicated significant differences associated with region/grade level, child's age and sex. The regional breakdowns in Table 7.17 suggest that the Southeast first grade group named fewer children than the other regions; however, there were ethnic interactions with this main effect. Blacks in the Southeast appeared to name more classmates than Whites, while Whites and Hispanics in the Southwest named more classmate friends than Blacks. This interaction may be related to the ethnic composition of the class.

Table 7.17

Distribution of NUMBER OF FRIENDS NAMED Scores by Area and Ethnicity for Head Start Sample

```
           MEAN I
          COUNT I  BLACK        WHITE        HISPANIC    OTHER           ROW
        STD DEV I                                                       TOTAL
                I        1  I         2  I         3  I         4  I
AREA    --------I-----------I------------I------------I------------I
              1 I    3.306  I    2.893   I    1.625   I    2.438   I    2.909
  NORTHEAST     I       49  I      103   I        8   I       16   I      176
                I    2.632  I    2.700   I    1.188   I    2.128   I    2.505
               -I-----------I------------I------------I------------I
              2 I    2.540  I    1.520   I        0   I    2.250   I    2.398
  SOUTHEAST     I      163  I       25   I        0   I        8   I      196
                I    2.149  I    1.122   I        0   I    1.282   I    2.042
               -I-----------I------------I------------I------------I
              3 I    2.000  I    3.000   I    3.826   I    1.000   I    3.011
  SOUTHWEST     I       31  I       14   I       46   I        3   I       94
                I    1.414  I    2.909   I    2.969   I    1.000   I    2.629
               -I-----------I------------I------------I------------I
              4 I    3.308  I    2.797   I    1.500   I    1.733   I    2.731
  WEST          I       26  I       74   I        4   I       15   I      119
                I    2.346  I    2.152   I    1.000   I    1.280   I    2.122
               -I-----------I------------I------------I------------I
     COLUMN TOTAL    2.691       2.708        3.362        2.048        2.719
                       269         216           58           42          585
                     2.224       2.423        2.833        1.662        2.341

NUMBER OF MISSING OBSERVATIONS =          71
```

The significant regression coefficient with age (.15), in view of the lower scores for the first grade group, suggests that older children within grades tend to name more classmates as friends. This age relationship adjusted for grade is similar to that found for the WRAT and Achievement Striving scores. The regression coefficient for child sex in Table 7.9 indicates that girls tend to name more classmates as friends than do boys.

The regression analysis of the Extroversion ratings indicated significant relationships with income and the missing information codes for sex and SES data. There is a slight tendency for children from relatively higher income families to be rated by teachers as more extroverted. This is the only measure on which income accounted for any significant variance independent of the other demographic factors. For reasons specific to this data base, those children without recorded sex information tended to be rated lower on Extroversion, and those with missing SES data tended to be rated higher. The significance of these coefficients suggests that the findings on Extroversion may not generalize beyond this particular data base.

The two parent attitudinal factors which accounted for variance in WRAT achievement scores and in the Achievement Striving ratings also accounted for variance in the Extroversion ratings, namely Satisfaction with the Child's Schooling and Educational Expectations for the Child. The consistency of relationships across these domains suggests that higher-achieving, more motivated and socially adaptive Head Start children tend to have parents who are satisfied with their child's schooling and expect more from their children educationally.

The teacher ratings of the child's popularity appear related to only two indicators in the regression analysis of Table 7.9, namely family composition and family size. A breakdown of the scores by family composition in Table 7.18 indicates that teachers tend to rate children from two-adult homes as more popular than those from either single-parent or multiple-adult homes.

The regression of family size on teacher ratings of child popularity suggests that children from larger families are seen as less popular. However, the breakdown of popularity scores in Table 7.19 indicates this is mainly due to one category (10 or more), and is probably an artifact.

Table 7.18

Distribution of RATED POPULARITY Scores by Family Composition and Ethnicity for Head Start Sample

MEAN COUNT STD DEV	BLACK 1	WHITE 2	HISPANIC 3	OTHER 4	ROW TOTAL
1	6.000	6.544	6.375	6.444	6.264
SINGLE PARENT	70	57	8	9	144
	1.330	1.890	.744	1.014	1.551
2	6.787	6.949	6.923	6.667	6.876
TWO ADULTS	75	118	26	15	234
	1.339	1.401	1.787	1.291	1.416
3	6.157	6.522	6.436	6.000	6.274
MULTIPLE ADULTS	60	23	11	1	95
	1.354	.994	.674	0	1.216
COLUMN TOTAL	6.332	6.783	6.756	6.500	6.569
	205	198	45	25	473
	1.380	1.528	1.433	1.158	1.451

NUMBER OF MISSING OBSERVATIONS = 183

Table 7.19

Distribution of RATED POPULARITY Scores by ~~Family Size~~ and Ethnicity for Head Start Sample

```
    MEAN I
   COUNT I  BLACK       WHITE       HISPANIC   OTHER           ROW
 STD DEV I                                                     TOTAL
         I        1  I        2  I        3  I        4  I
---------I-----------I-----------I-----------I-----------I
       2 I    5.800  I    6.125  I    7.000  I    7.000  I     6.188
         I        5  I        8  I        1  I        2  I        16
         I    1.304  I     .835  I        0  I    1.414  I     1.047
        -I-----------I-----------I-----------I-----------I
       3 I    6.458  I    6.563  I    7.111  I    7.000  I     6.612
         I       24  I       32  I        9  I        2  I        67
         I    1.503  I    2.124  I    1.965  I    1.414  I     1.858
        -I-----------I-----------I-----------I-----------I
       4 I    6.355  I    6.964  I    6.889  I    6.636  I     6.704
         I       40  I       55  I        9  I       11  I       115
         I    1.248  I    1.319  I     .782  I    1.286  I     1.277
        -I-----------I-----------I-----------I-----------I
       5 I    6.487  I    6.804  I    6.500  I    6.500  I     6.634
         I       39  I       46  I       10  I        6  I       101
         I    1.335  I    1.529  I    1.269  I     .837  I     1.391
        -I-----------I-----------I-----------I-----------I
       6 I    6.257  I    7.037  I    6.727  I    6.600  I     6.615
         I       35  I       27  I       11  I        5  I        78
         I    1.482  I    1.315  I    1.902  I    2.074  I     1.539
        -I-----------I-----------I-----------I-----------I
       7 I    6.435  I    6.789  I    6.000  I    8.667  I     6.702
         I       23  I       19  I        2  I        3  I        47
         I    1.308  I    1.357  I        0  I    2.082  I     1.428
        -I-----------I-----------I-----------I-----------I
       8 I    6.500  I    6.556  I    7.000  I    6.000  I     6.519
         I       16  I        9  I        1  I        1  I        27
         I     .816  I    1.810  I        0  I        0  I     1.189
        -I-----------I-----------I-----------I-----------I
       9 I    6.769  I    6.667  I    6.500  I    5.000  I     6.632
         I       13  I        3  I        2  I        1  I        19
         I    1.787  I     .577  I     .707  I        0  I     1.535
        -I-----------I-----------I-----------I-----------I
      10 I    5.778  I    6.000  I    6.333  I        0  I     5.848
 10 OR MORE I    27  I        3  I        3  I        0  I        33
         I    1.423  I        0  I     .577  I        0  I     1.302
        -I-----------I-----------I-----------I-----------I
  COLUMN TOTAL 6.359      6.787       6.729       6.774         6.579
                 222        202          48          31           503
               1.370      1.513       1.395       1.477         1.451

NUMBER OF MISSING OBSERVATIONS =        153
```

7.3.2.4 Unsocial, Immature Behaviors

The regression analysis accounted for only a small percent of the variance of scores in this domain. On a score combining teachers' ratings of hostility and aggression, sex differences accounted for significant variance. Consistent with much previous research, boys were rated as more aggressive than girls. No other background factors made a significant difference in these ratings. There is one notable interaction with the general sex difference. The breakdown of sex differences by ethnic type in Table 7.20 indicates that male Hispanics tend to be rated lower than female Hispanics in hostility and aggression. In addition, the overall hostility and aggression ratings for Hispanics tended to be lower than for other ethnic groups. (This pattern may suggest a style of socialization in Hispanics somewhat different from that in other groups.)

One other measure in this domain was included in the regression analysis, the Asocial score from the Values Inventory for Children. Only 6% of the variance in the Asocial score was accounted for by the demographic descriptors, and no significant increase was contributed by the parent attitudinal factors. The only descriptor demonstrating a significant independent relationship to the Asocial score was mother's education. The breakdown of scores in Table 7.21 indicates that for all ethnic groups as level of mother's education increases the child's Asocial score decreases. Although there are ethnic differences in the raw score distributions, they did not appear as a significant factor in the regression analysis independent of other demographic differences.

Table 7.20

Distribution of HOSTILITY/AGGRESSION Scores by Sex and Ethnicity for Head Start Sample

```
            MEAN I
           COUNT I  BLACK        WHITE        HISPANIC   OTHER          ROW
         STD DEV I                                                      TOTAL
                 I       1  I         2  I         3  I          4  I
        ---------I----------I------------I------------I-------------I
               1 I   19.072 I    16.793  I   12.824  I    14.818  I    17.870
MALE             I       85 I        71  I       17  I        11  I       184
                 I    9.907 I    10.130  I    8.087  I     7.872  I     9.639
                -I----------I------------I------------I-------------I
               2 I   16.596 I    12.924  I   14.200  I    14.091  I    15.612
FEMALE           I       99 I        66  I       25  I        11  I       201
                 I    9.818 I     7.560  I    9.971  I     7.086  I     8.592
                -I----------I------------I------------I-------------I
               4 I   16.944 I    24.183  I   17.000  I    20.000  I    18.954
MISSING SEX INFO I       36 I        60  I        5  I         8  I       109
                 I   11.757 I     9.394  I   14.680  I    11.225  I    10.564
                -I----------I------------I------------I-------------I
   COLUMN TOTAL      17.586      17.701      14.000       15.933        17.106
                        220         197          47           30           494
                      9.985       9.313       9.685        8.662         9.527

NUMBER OF MISSING OBSERVATIONS =       162
```

Table 7.21

Distribution of ASOCIAL Scores by Mother's Education and Ethnicity for Head Start Sample

```
           MEAN I
          COUNT I  BLACK       WHITE       HISPANIC    OTHER          ROW
        STD DEV I                                                   TOTAL
                I       1  I        2  I        3  I        4  I
        --------I----------I-----------I-----------I----------I
              1 I   24.233 I   20.821  I   23.458  I   23.750 I   23.249
LESS THAN DIPLOM I     129 I       56  I       24  I        8 I     217
                I    8.399 I    8.938  I    9.614  I    5.036 I    8.695
               -I----------I-----------I-----------I----------I
              2 I   22.422 I   19.423  I   22.720  I   21.947 I   21.311
HI SCHOOL DIPLOM I      90 I       78  I       25  I       19 I     212
                I    9.164 I    7.216  I    8.834  I    6.892 I    8.335
               -I----------I-----------I-----------I----------I
              3 I   21.737 I   19.625  I   15.250  I    8.000 I   18.674
MORE THAN   HI S I      11 I       24  I        4  I        4 I      43
                I    6.420 I    7.494  I   12.501  I    7.439 I    8.433
               -I----------I-----------I-----------I----------I
    COLUMN TOTAL    23.404      19.949      22.491      20.613     21.962
                       230         158          53          31        472
                     8.486       7.885       9.508       8.057      8.537

NUMBER OF MISSING OBSERVATIONS =       184
```

7.4 SUMMARY

The analyses presented in this chapter have examined the relevance of background characteristics to the Head Start child's performance and adjustment in the first year of elementary school. In general, a number of demographic descriptors were found to contribute to the understanding of variations in the children's achievement test scores and achievement related behaviors; but these factors did not explain much of the variation in teacher ratings of the child's socio-emotional adaptation to the school environment. The characteristics most closely associated with achievement were child's age, mother's level of education, child's ethnic type, and a number of parental attitudes including satisfaction with the schools, expectations for the child, and a relatively lower need to avoid educational failure. Background factors associated with achievement test performance were also associated with teacher ratings of the child's achievement striving, except that there were no systematic ethnic differences in teacher ratings.

The relationship of child's age to achievement is not surprising. On the kinds of achievement skills measured at school entry, higher age very directly translates into higher levels of maturation, learning readiness and higher performance. The relationship of mother's education to achievement is found in most educational studies. A correlate of achievement found in many studies but not significant in these data is level of income. This lack of relationship may be due to the fact that the Head Start population has a more restricted range of income than the population at large.

The findings raise a number of questions: Why is so much more variance accounted for in academic test performance compared to teacher ratings in the socio-emotional areas? While certain parent attitudes contribute a small increment to the variance in achievement, why do these attitudes almost double the variance accounted for in the achievement striving ratings beyond that explained by the demographic characteristics? Why are ethnic differences significant in academic test performance but not in teacher ratings?

Since the reliabilities of the teacher ratings and the WRAT scores are close to .90, the variance-accounting differences cannot be explained by primarily measurement error. It may be that the achievement test assesses a broader range of abilities, subject therefore to a wider range of influences, while the teacher ratings assess a more limited domain of performance specific to the school environment. If this is the case, more studies are needed to identify the teacher and classroom factors associated with variations in the way in which teachers rate the abilities and socio-emotional adaptations of children to the school. Similarly, closer examination is needed to determine how parent attitudes and expectations are related to higher child achievement, and the extent to which such parent attitudes are amenable to the influence of Head Start programs. Finally, the data presented suggest that children, whose mothers have lower education, tend to perform relatively lower on measures of school readiness. The data discussed in Chapter Eight, however, suggest that Head Start children whose mothers have lower education levels tend to score higher than similar non-Head Start children. If these patterns can be replicated in better-controlled evaluations, they may suggest that Project Head Start is providing benefits of school readiness to those who need them most.

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CHAPTER EIGHT

A COMPARISON OF HEAD START GRADUATES WITH THEIR CLASSMATES

8.0 INTRODUCTION

This chapter is concerned with the comparison of Head Start graduates with their classmates and focuses on two issues:

1) Does a posttest-only research design which gathers data during the first year of public school on Head Start graduates and their peers with no preschool experience produce data which are appropriate for discerning the benefits of Head Start?
2) Given data that appear adequate for comparison, does Head Start appear to benefit children?

These two evaluation questions present a somewhat awkward mix in the context of an evaluation of Head Start. However, the ex post facto analysis, which is of necessity utilized in this chapter, is a controversial approach of questionable utility. The assessment of a program without measures of specified outcomes both before and after the program and without random or controlled assignment of subjects to treatment and comparison groups is always a dubious endeavor (Meehl, 1970). The assessment of program effects without pretests and without controlled assignment is substantially less expensive than when such procedures are utilized. Furthermore, the approach has been utilized successfully in similar studies (Barnow, 1973). Thus, if posttest-only design and ex post facto analysis are feasible, and if the results derived by this approach are believable, scarce evaluation resources can be utilized with greater efficiency.

The critical weakness of the posttest-only approach rests on the non-comparability of treatment and comparison groups on variables traditionally related to children's performance -- variables such as ethnic membership of the children, family income, etc. Random assignment assures comparability, while bias-adjusting techniques, analyses of covariance, and various regression approaches attempt to produce comparable groups statistically. The capability of a bias-adjusting technique to accomplish an appropriate adjustment is determined at least in part by the predictive value of the variables studied and by their reliability. Pretest measures almost always ensure good prediction, often on the order of 50% of the variation. In the present study, neither random assignment nor pretest measures are available. Thus, before we address the question of the benefits of Head Start, we must address the question of the comparability of Head Start graduates and their classmates; specifically, the comparability of Head Start graduates and their classmates who have not participated in preschool.

Absolute comparability of groups should not be expected, nor would such comparability be achieved even with random assignment. Given a sufficient number of comparisons, even randomly assigned groups will be found to differ on some variables by chance. Furthermore, groups can justifiably be claimed to differ on unmeasured variables such as self-selection factors or other relevant variables. Thus, within the ex post facto paradigm, we should expect nothing more than "practical" comparability. For the groups to be compared, we might require that groups have similar distributions on variables known to be important either in the treatment selection process or in the prediction of outcomes. In the ex post facto comparison of Head Start graduates with their peers with no preschool, we would require that the children in the two groups have similar ethnic background, age and sex; come from families with similar size, income and education levels; come from similar or even the same classrooms, etc. Given comparability on such a set of variables, one may conclude that the groups are comparable and, given such "practical" comparability, the groups may be compared, bearing in mind that the attribution of outcome differences between groups to Head Start is an inference which essentially goes beyond the data. Just as the comparability of the groups is a "judgement call" the inference that differences between groups on outcome measures are attributable to Head Start is a judgement based on circumstantial rather than direct evidence. A host of plausible alternative explanations of any differences may be generated. Thus, we must recognize in advance that an ex post facto analysis can only yield suggestive evidence and does not in any sense imply a causal linkage between group differences and treatment.

In a posttest-only design, one may hope to find comparable groups. However, since the Head Start program serves economically or otherwise needy children, the likelihood of finding comparable groups within the same classrooms, communities, etc., is substantially reduced. Head Start children and children with no preschool experience, even selected from the same classrooms, are likely to differ in important ways. Given measured differences between groups, it may still be possible to meaningfully compare the groups if the variables on which the differences are found and the outcome measures are highly related. That is, it may be possible to adjust the differences on the outcome measures for the differences on the background measures, using the relationship between the outcome and background measures. Any such approach involves an estimation of what scores *would* have been achieved by the children *if* differences between groups had not existed. The tentative nature of this statement highlights the intricate assumptions upon which this approach rests. Some authors find these assumptions totally unpalatable and reject *ex post facto* analysis (Meehl, 1970). All authors with whom we are familiar advise caution in interpretation.

A brief review of some of the critical issues in the analysis of posttest-only studies will clarify these problems. In a controlled experiment the sampling plan produces groups which are ideally matched. Any group differences prior to the "treatment" are by definition random. In a naturalistic study, such as the current evaluation, children, parents and schools become part of the sample for many reasons not under the control of the investigator, reasons such as preselection bias, selective attrition, and others. The risk for the investigator is that the factors which affect the sampling procedures also affect the outcomes under study. Factors affecting group membership thus become confounded with the treatment itself. The central analytic problem in a posttest-only survey is to untangle the effects of a treatment from the effects of such confounding factors. Analytic methods which equalize the groups for these factors may be employed to rule out the plausible alternative hypotheses which these confounding variables pose against the hypothesis of treatment effects. Little expert consensus exists on the applicability of these methods. As Porter (1973) points out, evaluation methodologists fall into two schools of opinion about the adjustment of outcome measures for pretreatment differences. One camp, represented by Lord (1967), Meehl (1970), and Cronbach and Furby (1970), takes a pessimistic view of such adjustment, claiming that no adjustment yet devised can unconfound treatments from background factors satisfactorily in change studies. Others, notably Porter (1973), and Campbell and Boruch (1975), take a more pragmatic view and recommend adjustment by means of analysis of covariance or a variation thereof.

The essential differences between these camps are not over algebraic issues; both, indeed, have contributed to the literature on true scores and base-free measures of change. Their disagreement is more substantive or philosophical. The pessimists argue that the adjustment for initial differences between groups must always be imperfect, for two reasons: available adjusting variables never capture all the relevant differences between the groups, and the adjustment mechanism performs inexactly even for the available adjusting variables. The pragmatists argue, on the other hand, not that the methods are "correct" or "perfect" but that they are useful and that decision makers cannot obtain better information by any other approach. Even the pragmatists do, however, caution the evaluator who would rely upon these adjustment devices.

The logic of this chapter is presented in Figure 8.1. The upper section of the figure presents the decision required for the direct comparison of the groups; this discussion is presented in Section 8.1. If the groups to be compared do not have similar background characteristics, an adjustment strategy requires that the correlations between background measures and an outcome measure be similar within the groups to be compared and that the background measures account for substantial variation in the outcome measure. Section 8.2 presents data relevant to this decision. The box in Figure 8.1 containing traditional adjustment techniques is shaded to indicate that the required conditions were not met. Thus, we move into the lower third of the figure where heuristic strategies are presented. The techniques presented in this section discussed in Section 8.3 and 8.4 of this chapter do not provide estimates of treatment effects which have meaningful quantitative values (point estimates), since the techniques have either no formal mathematical foundation or they violate plausible assumption and may distort the data. However, the techniques (value added presented in Section 8.3 and matching presented in Section 8.4) provide a useful qualitative look at differences between groups when other analytic techniques cannot be used. The differences derived by such methods can be viewed as representing the likely direction, positive or negative, of the difference between groups.

The remainder of this chapter explores the basic issues set forth in this introduction. First, the comparability of the Head Start graduates and their classmates is explored on background measures and on outcome measures. This comparison suggests that Black Head Start graduates and their Black classmates with no preschool experience may be compared, but that substantial differences exist for White Head Start graduates versus

LOGIC OF THE CHAPTER

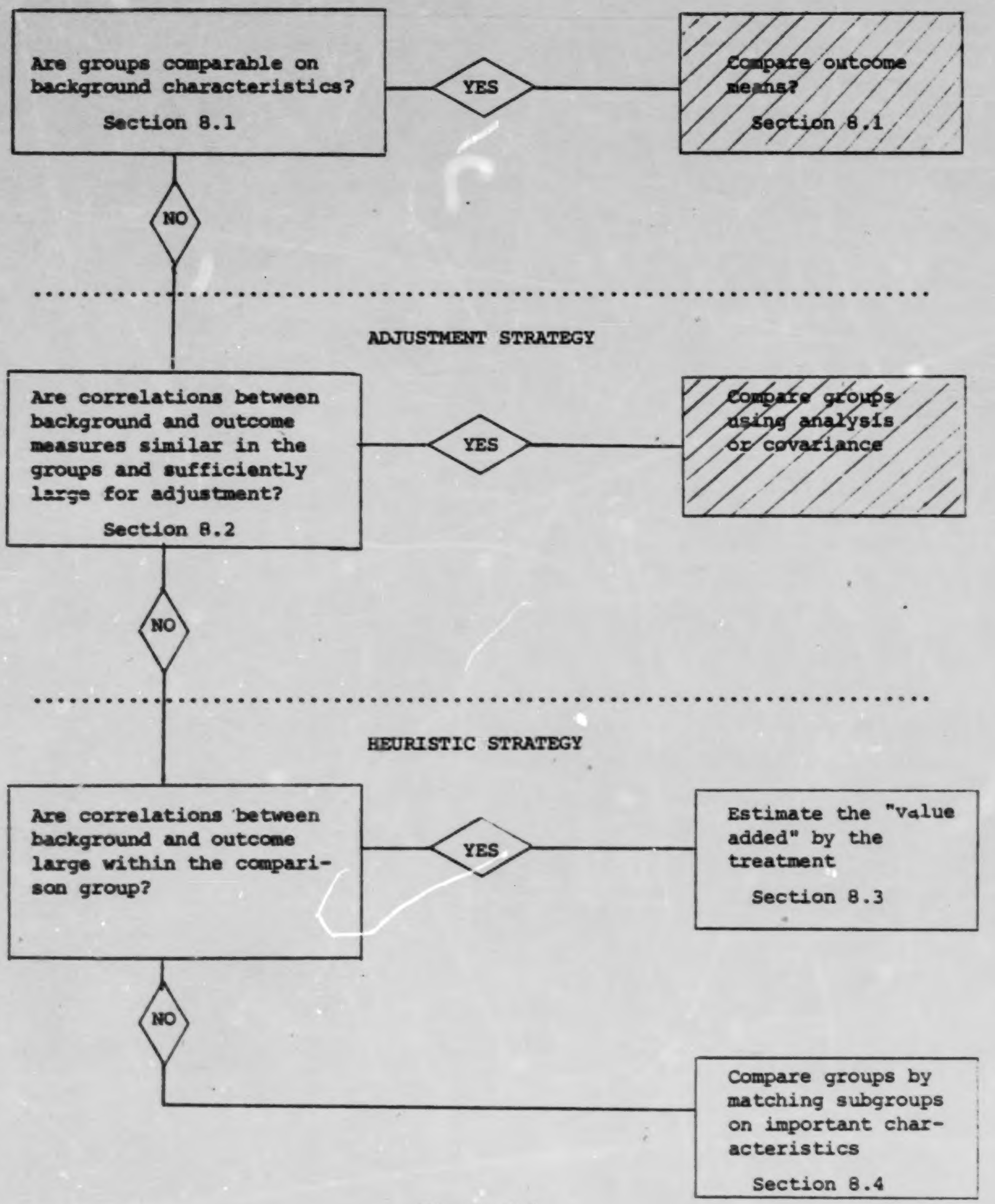
Are groups comparable on background characteristics?
Section 8.1
YES
Compare outcome means?
Section 8.1
NO
ADJUSTMENT STRATEGY
Are correlations between background and outcome measures similar in the groups and sufficiently large for adjustment?
Section 8.2
YES
Compare groups using analysis or covariance
NO
HEURISTIC STRATEGY
Are correlations between background and outcome large within the comparison group?
YES
Estimate the "value added" by the treatment
Section 8.3
NO
Compare groups by matching subgroups on important characteristics
Section 8.4

Figure 8.1

their White peers with no preschool experience. The analysis of the outcome measures indicates that Black Head Start graduates have somewhat higher achievement scores, seek more proximity and attention from peers and adults in the classroom and are more aggressive and hostile than their Black classmates without preschool experience. The White Head Start graduates do not score as high as their more advantaged peers on the Achievement Test. However, these Head Start graduates seek proximity and attention relatively more and are more aggressive and hostile than their White peers.

The relationships between the outcome measures and background measures are explored for the different groups. This exploration indicates that only the achievement measure (Wide Range Achievement Test) can be predicted with sufficient strength to merit the use of an adjustment technique, and only for the Black children. Furthermore, there are substantial differences in the relationships between the various measures for the different groups. Finally, the possible achievement benefits of Head Start for Black children are explored. The program does appear to produce some benefit for these children; furthermore, the analysis suggests that the Black children with relatively lower family income and the children from single-parent families with a working parent benefit most.

8.1 BACKGROUND CHARACTERISTICS AND OUTCOME SCORES: HOW COMPARABLE ARE HEAD START VERSUS CHILDREN WITH NO PRESCHOOL EXPERIENCE?

The comparability of Head Start graduates with their peers without preschool is a necessary condition for a meaningful assessment of the benefits of Head Start. This section explores the differences between the Head Start and no preschool groups within ethnic group (Black and White). The comparison is conducted within ethnic group because of the association in these and other data between ethnic membership (Black vs. White)* and performance in school (Bryant, E., et al., 1974), and because ethnic membership serves as a useful proxy for a variety of social inequality indicators. Thus, by stratifying or blocking on ethnic group and conducting comparisons of Head Start versus no preschool children within ethnic group, comparable groups may be attained. Such blocking is further motivated by the fact that the experience of Black and White children is likely to vary substantially so that different factors may influence their performance in school (Weisberg, 1974).

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*Other ethnic groups were excluded from this chapter, because the number of children within the various groups was too small.

The background characteristics for the Head Start and no preschool groups for Black and White children are presented in Table 8.1. The table presents data on the percent of students in the southeast, age, percent female, percent missing sex information, the percent of mothers with some college, the percent of mothers who graduated from high school, the percent of single-parent families, income expressed in thousands of dollars, family size, the incidence of missing SES information, and the number of children within each group. The category "Southeast" is a proxy for grade level, since the school entry age for the children sampled in that region is about one year higher than the mean age found in the other regions. Other grade level information is not available on the data base. The remaining variables presented were selected because they have traditionally been associated with differences in performance in school.

A comparison of the Black Head Start graduates with the Black children who have not attended preschool (Home) suggests that the two groups are fairly comparable on these background characteristics. Similar percentages of children are found in the southeast, 62% of the Head Start graduates versus 59% of the children without preschool. The Head Start graduates are approximately a month and a half older than the children without preschool. The two groups have similar percentages of girls and similar percentages of children without sex information. A somewhat larger percentage of the mothers of Head Start graduates have completed high school (41% versus 30%). While relatively few of the mothers (only 5%) have education beyond high school, the groups have similar percentages of single parent families. However, the Head Start graduates have a mean income which is approximately a thousand dollars lower than the children without preschool experience. The family size of the two groups is similar. Finally, the rate of missing data on SES information is somewhat lower for the Head Start graduates than for the no preschool group. The no preschool group is also substantially smaller than the Head Start group. In general, the groups appear to be quite comparable with a few minor exceptions.

Table 8.1

Background Characteristics for the Head Start and No Preschool Groups For Black and White Children

Group / Characteristic		Black		White	
		Head Start	No Pre-school	Head Start	No Pre-school
Percent in Southeast		62%	59%	10%	4%
Age (Months):	Mean	73.2	71.8	69.8	68.5
	S.D.	8.3	8.8	6.5	4.9
Percent Female		37%	39%	36%	35%
Percent Missing Sex Information		16%	20%	29%	27%
Percent Mothers with Some College		5%	5%	13%	22%
Percent Mothers Who Graduated from High School		41%	30%	40%	54%
Percent Single Parent Families		41%	39%	31%	9%
Income ($1,000.):	Mean	5.5	6.9	7.0	10.9
	S.D.	3.5	3.7	3.8	3.6
	Median	4.9	5.0	5.9	11.0
Family Size:	Mean	6.2	6.0	4.9	4.8
	S.D.	3.0	2.9	1.8	1.4
	Median	5.4	5.3	4.6	4.4
Percent Missing SES Information		3.5%	12.1%	5.7	3.3
Number of Children		205	85	216	178

The comparison of the White Head Start graduates with the White children who did not attend preschool (Home) produces a substantially different picture. First consider the similarities: a relatively low percentage of the children come from the southeast (10% of the Head Start graduates versus 4% of the group with no preschool experience). The groups are similar in age. The groups have similar percentages of girls and similar missing sex information. The family sizes of the two groups are similar as are the rates of missing SES information. However, that is where the similarity ends. Only 40% of the Head Start mothers graduates from high school, whereas 54% of the no preschool group mothers graduates from high school. Furthermore, only 13% of the White Head Start graduates have mothers with education beyond high school versus 22% of the mothers of the no preschool children. Thirty-one percent of the White Head Start graduates versus only 9% of the White no preschool group come from single-parent families. On income, the Head Start group has a mean income which is approximately $4,000 below the mean income of the White group without preschool experience. In general, the White Head Start graduates appear to be substantially disadvantaged on socio-economic variables relative to the White no preschool group; consequently, their comparison in the analysis of child scores is questionable.

Outcome Measures. Table 8.2 presents the means and the standard deviations on outcome measures for the Head Start and the no preschool groups, again, for Black and White children. Means and standard deviations are presented for the Wide Range Achievement Test, for Achievement Striving, for Aggression and Hostility, for Popularity, for Proximity and Attention Seeking and for Inconsistency or Inhibition in Proximity and Attention Seeking. (See Chapter Six for a definition of the measures.)

A comparison of the Black Head Start graduates with the Black children with no preschool experience indicates that the Black Head Start graduates score somewhat higher, approximately a quarter of a standard deviation, on the Wide Range Achievement Tests. Given the general comparability of the two groups, a difference of this magnitude is difficult to explain on the basis of background demographic differences between groups. Beyond demographic differences, there is always the hypothesis that the higher academic performance in the Head Start group could be due to selection factors. That is,

Table 8.2

Outcome Means and Standard Deviation for
Head Start and No Preschool Groups for Black and White Children

Group / Measure	Black				White			
	Head Start		No Preschool		Head Start		No Preschool	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
WRAT	45.9	16.1	41.6	15.0	44.5	14.5	48.6	14.0
Achievement Striving	47.7	8.8	47.6	8.7	47.7	8.5	52.1	8.9
Aggression/ Hostility	17.6	9.9	14.8	8.5	17.7	9.3	14.1	6.6
Popularity	6.3	1.3	6.1	1.7	6.7	1.5	6.8	1.6
Proximity and Attention Seeking	36.0	11.7	32.0	10.9	37.2	11.7	32.4	9.7
Inconsistency or Inhibition in Attention Seeking	12.3	4.7	12.5	4.0	12.4	5.2	11.4	4.7

parents who enroll their children in Head Start, although demographically similar to other parents, tend to value education or educationally relevant activities for their children more than do other parents. However, in Chapter Six an analysis of the relationship between several parental attitudes and interactions with their children suggested that these factors accounted for little additional variance in academic scores beyond demographic differences. If it is possible to rule out the hypotheses for such pre-existing group differences, the probability becomes much stronger that the higher academic performance of the Head Start graduates is attributable to their attendance in Head Start.

The means presented in Table 8.2 indicate that the Head Start group tended to be rated by teachers as higher on Aggression and Hostility as well as on seeking out other children and adults for closeness, contact and attention. No differences between groups were indicated in the teacher ratings for Popularity, Achievement Striving or in the extent to which children were conflicted, inconsistent or vacillating in their seeking out of others. A certain ambivalence underlies the interpretation of these ratings. Children may seek out adults and their peers for a number of reasons, including either emotional dependency or sociability or for reasonable information and assistance. Similarly, ratings of Aggression and Hostility may reflect a number of both positive and negative characteristics including not only fighting or abuse, but also assertiveness, expressiveness and greater activity. The exact character of the group differences observed here remains to be determined; however, the pattern of differences reported in Table 8.2 may suggest that Black Head Start children are more active, assertive, gregarious and academically competent than their peers who had no preschool group experience. Such an interpretation is consistent with other observations of Head Start graduates in their first year of elementary school (Wolff and Stein, 1966).

A comparison of the White Head Start graduates and the White children with no preschool experience indicates that the Head Start graduates have somewhat lower achievement scores, lower by approximately a quarter of a standard deviation. The Head Start group also has somewhat lower achievement striving, lower by approximately a half of a standard deviation. Again, however, the Head Start graduates seek out proximity and attention of adults and other children and display somewhat more aggression and hostility relative to children with no preschool. The remaining measures show no differences. The differences found between the White Head Start graduates and the no preschool group are somewhat difficult to interpret in light of the relatively large differences between the groups on socio-economic factors. In fact, the difference on the Wide Range Achievement Tests might be expected on the basis of these relatively large SES differences, even if Head Start had raised the children's scores. However, the fact that the White Head Start graduates and the Black Head Start graduate both displayed relatively more aggression and hostility than their peers without preschool attendance, as well as sought out the proximity and attention of adults and other children relatively more often, suggests that Head Start may have had an impact on these White Head Start graduates as well, and that the impact is more in the nature of the social adjustment to school for these children, rather than on achievement. The picture of the group differences suggests that White Head Start graduates are more aggressive or assertive, more socially active or gregarious, but lower in academic performance and achievement-related behaviors. The lack of comparability between groups suggests that differential background and selection factors must be examined before these performance differences could be attributed to the Head Start program.

8.2 RELATIONSHIPS BETWEEN BACKGROUND CHARACTERISTICS AND OUTCOMES

Although the Black Head Start graduates and children with no preschool appear comparable and the Black Head Start students appear to produce somewhat higher scores on some of the measures, it is possible to improve on the comparison and get a more fine-grained estimate of the benefit of Head Start by adjusting the differences on outcome measures for the differences on background measures. For the White group, such an adjustment is necessary for any meaningful comparison of the two groups, given their non-comparability on income and mother's education. In this section, the relationships between the background measure and the outcome measures are explored within each of the four groups as a necessary requisite to making statistical adjustments. Relationships between 1) the background measures, 2) the background and the outcome measures, and 3) the outcome measures are presented. This exploration will provide a better understanding of the differences between groups as well as a better understanding of the outcome measures.

8.2.1 Black Head Start Group

Correlations for Black Head Start graduates are presented in Table 8.3. There are substantial correlations among several of the background measures. The correlation between age of the child and southeast versus other is quite high (.66). This correlation reflects the fact that the majority of students in the southeast are first grade students, whereas the students elsewhere are kindergarten students. The correlation between family size and the variable designating southeast versus other also indicates large families in this region.* Other correlations which are of general substantive interest are the correlations between income, mother's education, multiple-parent family versus single-parent family, and family size. Families with a mother who has graduated from high school have somewhat higher incomes than those with less education; multiple-parent families have somewhat higher incomes than single-parent families, and larger families tend to have two parents as well as higher incomes. In general, the correlations among the various background measures reflect typical relationships found in the society at large.

Let us now turn to the correlations between the background measures and the outcome measures. The Wide Range Achievement Test is correlated with the variable designating southeast versus other regions, with age and with multiple-parent versus single-parent families. All of these correlations are positive indicating higher Wide Range Achievement Test scores for children in the southeast, for older children and for children from multiple-parent families as opposed to single-parent families. For the remaining measures, there are surprisingly few significant correlations. Only one measure shows an additional significant correlation. The correlation indicates higher achievement striving for children from multiple- versus single-parent families. These low correlations suggest that these measures are independent of the background measures.

The correlations among the outcome measures themselves indicate that the Wide Range Achievement Test is positively correlated with achievement

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*Additional relatively high correlations which are not of substantive interest are found between sex and missing sex information, and between mothers with some college versus others and mothers who graduated high school versus others. Both correlations reflect the coding scheme used to develop the correlation.

Table 8.3

CORRELATIONS AMONG BACKGROUND AND OUTCOME MEASURES FOR THE BLACK HEAD START GROUP (PEARSON r's) (N = 205)

	BACKGROUND										OUTCOME					
	Southeast vs. Other	Age	Female vs. Male	Missing Sex	Mother Some College	Mother High School Graduate	Multiple vs. Single Parent Family	Income	Family Size	Missing SES	WRAT	Proximity and Attention Seeking	Achievement Striving	Popularity	Inconsistency or Inhibition in Attention Seeking	Aggression/Hostility
Southeast vs. Other	--															
Age	0.66*	--														
Female vs. Male	0.16	0.18	--													
Missing Sex	-0.20*	-0.15	-0.34*	--												
Mother Some College	-0.01	-0.03	-0.04	0.08	--											
Mother High School Graduate	-0.16	-0.16	0.07	0.10	-0.19*	--										
Multiple vs. Single Parent Family	0.08	0.08	-0.01	-0.05	0.07	0.07	--									
Income	-0.01	0.04	0.02	0.01	0.13	0.23*	0.46*	--								
Family Size	0.23*	0.04	0.04	0.04	-0.04	0.01	0.36*	0.24*	--							
Missing SES	-0.07	0.07	-0.03	-0.03	-0.08	-0.03	-0.12	-0.12	-0.10	--						
WRAT	0.50*	0.52*	0.08	-0.16	0.07	-0.14	0.20*	0.06	0.04	0.07	--					
Proximity and Attention Seeking	0.00	0.07	0.06	-0.13	0.06	0.09	-0.06	0.00	-0.15	0.08	-0.05	--				
Achievement Striving	0.10	0.00	-0.05	-0.04	0.20*	0.02	0.12	0.10	-0.08	0.10	0.30*	-0.05	--			
Popularity	-0.02	-0.02	-0.01	-0.01	-0.03	-0.02	0.15	-0.02	-0.11	0.10	-0.01	0.12	0.14	--		
Inconsistency or Inhibition in Attention Seeking	-0.02	-0.07	0.00	0.03	0.05	0.00	-0.01	-0.02	0.06	-0.15	-0.18	-0.08	-0.29*	0.02	--	
Aggression/Hostility	-0.06	0.03	0.12	-0.03	0.02	0.05	-0.03	-0.06	-0.05	0.04	-0.13	0.45*	-0.29*	0.10	0.10	--

P ≥.01

striving and that this achievement dimension is relatively independent of the other measures. The correlations between achievement striving and 1) aggression and 2) inhibition in seeking out of adults and children, suggest that as achievement striving increases, aggression and inhibition decrease. Finally, the expression of aggression is highly correlated with the seeking out of proximity and attention from adults and children. The positive correlation of the Wide Range Achievement Test and achievement striving, plus the negative correlations between aggression and achievement striving on the one hand and inhibition in the seeking out of adults and children and achievement striving, suggests a profile of characteristics which may represent social maturity. That is, the child who scores high on the Wide Range Achievement Test tends to be a relatively less aggressive child, a child who is not conflicted with respect to seeking out others, and a child who strives to achieve. The relationship of aggression and the seeking out of proximity and attention from other adults appears to provide an additional dimension of the outcome measures which is relatively independent of the social maturity dimension. The child who is high on this dimension is more aggressive and seeks attention and proximity relatively more than other children. This dimension may represent gregariousness, assertiveness, activity, exploration or aggression.

8.2.2 Black No Preschool Group

The correlations for the Black children who have not participated in preschool are shown in Table 8.4. Again, there is a high correlation between age and location in the southeast region, reflecting the fact that the majority of children in the southeast are first grade students, whereas the children elsewhere are kindergarten students.* Also, we find substantial negative correlations between region and mothers having some college versus other education levels, indicating a somewhat lower incidence of mothers with education beyond high school in the southeast than elsewhere in the country. Furthermore, family size in the southeast appears to be somewhat larger than elsewhere and there is somewhat more missing SES information for this region. Other notable correlations are found between 1) income and 2) multiple-parent families and 3) between family size and multiple-parent families. Both corre-

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*The high correlation between missing sex information and the southeast indicating that there is relatively less missing sex information for the children in the southeast than elsewhere in the country is likely an artifact of the data gathering.

Table 8.4

CORRELATIONS AMONG BACKGROUND AND OUTCOME MEASURES FOR THE BLACK NO PRESCHOOL GROUP (PEARSON r's) (N = 85)

	BACKGROUND										OUTCOME					
	Southeast vs. Other	Age	Female vs. Male	Missing Sex	Mother Some College	Mother High School Graduate	Multiple vs. Single Parent Family	Income	Family Size	Missing SES	WRAT	Proximity and Attention Seeking	Achievement Striving	Popularity	Inconsistency or Inhibition in Attention Seeking	Aggression/Hostility
Southeast vs. Other	--															
Age	0.65*	--														
Female vs. Male	0.04	0.16	--													
Missing Sex	-0.37*	-0.25*	-0.40*	--												
Mother Some College	-0.23	-0.18	-0.05	0.08	--											
Mother High School Graduate	0.05	-0.07	0.17	0.20	-0.20	--										
Multiple vs. Single Parent Family	0.15	0.09	0.00	-0.09	0.01	-0.07	--									
Income	-0.02	0.01	-0.15	0.21	0.20	0.08	0.30*	--								
Family Size	0.18	0.15	0.09	-0.03	-0.07	-0.05	0.30*	0.10	--							
Missing SES	0.19	0.16	-0.16	0.09	-0.11	-0.08	-0.21	0.06	0.06	--						
WRAT	0.42*	0.62*	-0.01	-0.06	-0.14	0.07	0.30*	0.24	0.13	0.20	--					
Proximity and Attention Seeking	0.06	0.22	0.19	-0.11	-0.06	0.00	0.00	-0.05	0.23	0.07	0.10	--				
Achievement Striving	-0.04	0.05	0.14	-0.08	-0.03	0.18	0.34*	0.12	0.08	-0.06	0.33*	0.10	--			
Popularity	-0.16	-0.11	-0.08	0.07	-0.04	-0.02	-0.19	-0.13	0.12	-0.04	-0.15	0.25*	0.01	--		
Inconsistency or Inhibition in Attention Seeking	-0.16	-0.21	0.01	-0.10	0.01	0.12	-0.09	-0.14	0.09	0.01	-0.08	0.10	0.02	0.21	--	
Aggression/Hostility	-0.23*	-0.16	0.10	0.06	-0.10	0.09	0.00	0.07	0.05	-0.01	-0.21	0.39*	-0.05	0.15	0.05	--

* p ≤.01

lations are positive indicating that multiple-parent families in general have somewhat higher income and that multiple-parent families tend to be somewhat larger.

The correlations between the background and the outcome measures indicate high correlations between the Wide Range Achievement Test and southeast versus other regions, age, multiple parent family and income. All correlations are positive again indicating higher Wider Range Achievement Test scores for children in the southeast, for older children, for children in multiple-parent families and for children with higher income. It should be noted that the last correlation was not found for the Black Head Start graduates. That is, there was zero correlation between income and Wide Range Achievement Test scores for the Head Start graduates, whereas there is a substantial positive correlation between income and Wide Range Achievement Test scores for the Black group without preschool. The relationships between the other outcome measures and the background measures are also somewhat different from those found for Head Start graduates. The correlations indicate that achievement striving is higher for children with mothers who have graduated from high school, and higher for children in multiple-parent families (also evident in the Head Start group). The child's popularity is lower for children from multiple- versus single-parent families. Older children seek out proximity and attention from adults and other children relatively more, as do children from larger families. Inhibition and inconsistency of seeking out proximity and attention decreases with age. Finally, the Black children with no preschool in the southeast show relatively less hostility and aggression than elsewhere.

Turning to the correlations among the outcome measures, we find a high positive correlation between achievement striving and the Wide Range Achievement Test, and a moderate negative correlation between the Wide Range Achievement Test and hostility and aggression. There is also a high positive correlation between hostility and aggression and the seeking out of adults and other children, as well as a positive correlation between popularity and the seeking out of adults and other children. Finally, there is a moderate positive correlation between popularity and inhibition in the seeking out of adults and other children which is somewhat anomalous.

The correlations among these outcome measures are somewhat different for the Head Start graduates versus the children with no preschool. For the Black Head Start graduates, two dimensions of the outcomes appeared. One apparently related to achievement and the other perhaps related to sociability or gregariousness. For the children who have not had preschool, we find the achievement dimension with a high correlation between the Wide Range Achievement Test, achievement striving and a negative correlation with hostility. However, unlike the Black Head Start graduates, the Black children who have not attended preschool did not show negative correlation between hostility and achievement striving.

8.2.3 White Head Start Group

The correlations for the White children who graduated from Head Start are shown in Table 8.5. The table shows a substantial positive correlation between southeast versus other regions and age, and relatively high positive correlation between missing sex information and the southeast, and finally a substantial negative correlation between income and southeast versus other regions which indicates that the children from the southeast have somewhat lower family income than the children elsewhere in the country. The cluster of correlations between income, multiple-parent family and family size, indicates that family income in multiple-parent families is higher than single-parent families and that the multiple-parent families tend to be somewhat larger than single-parent families.

The correlations between the background and the outcome measures indicate few significant relationships. The only substantial correlation between outcomes and background measures are found for southeast versus other regions and the Wide Range Achievment Test indicating somewhat higher scores in the southeast. A moderate positive correlation between income and achievement striving indicates an increase in achievement striving with increasing income. Finally, there is a moderate negative correlation between income and inhibition of seeking proximity and attention from adults and peers.

The correlations among the outcome measures are very similar to those of Black Head Start graduates. There is a relatively strong positive correlation between Wide Range Achievement Test and achievement striving and a moderate negative correlation between the Wide Range Achievement Test and inhibition in the seeking out of adults and other children. There is also a moderate negative correlation between the seeking out of adults and other

Table 8.5

CORRELATIONS BETWEEN MEASURES FOR THE WHITE HEAD START GROUP (PEARSON r's) (N = 216)

	BACKGROUND										OUTCOME					
	Southeast vs. Other	Age	Female vs. Male	Missing Sex	Mother Some College	Mother High School Graduate	Multiple vs. Single Parent Family	Income	Family Size	Missing SES	WRAT	Proximity and Attention Seeking	Achievement Striving	Popularity	Inconsistency or Inhibition in Attention Seeking	Aggression/Hostility
Southeast vs. Other	--															
Age	0.55*	--														
Female vs. Male	-0.19*	-0.11	--													
Missing Sex	0.26*	0.17	-0.48*	--												
Mother Some College	-0.08	0.00	0.11	-0.06	--											
Mother High School Graduate	-0.11	-0.04	0.17	-0.21*	-0.32*	--										
Multiple vs. Single Parent Family	-0.09	-0.05	-0.04	0.01	0.01	-0.06	--									
Income	-0.31*	-0.15	0.11	-0.16	0.17	0.13	0.41*	--								
Family Size	-0.05	0.04	-0.06	0.01	-0.12	-0.04	0.43*	0.24*	--							
Missing SES	-0.04	0.01	0.01	0.04	-0.00	-0.04	-0.05	0.07	-0.02	--						
WRAT	0.27*	0.23*	-0.02	0.01	0.15	0.07	-0.06	-0.02	-0.11	-0.06	--					
Proximity and Attention Seeking	-0.09	-0.10	-0.01	0.02	-0.20*	0.13	-0.02	0.02	-0.12	0.02	-0.16	--				
Achievement Striving	-0.17	-0.03	0.05	-0.13	0.11	0.03	0.08	0.20*	-0.04	0.06	0.39*	-0.27*	--			
Popularity	-0.01	0.08	0.08	-0.10	-0.11	0.09	0.09	0.03	0.00	0.00	-0.08	0.16	0.10	--		
Inconsistency or Inhibition in Attention Seeking	0.11	0.07	-0.03	0.04	-0.08	-0.02	-0.14	-0.19	0.04	0.06	-0.22*	-0.04	-0.34*	0.04	--	
Aggression/Hostility	0.01	0.03	0.03	0.17	0.01	0.08	0.04	-0.02	-0.07	0.00	-0.08	0.42	-0.28*	0.08	0.01	--

P ≤.01

children and achievement striving and a substantial positive correlation between the seeking out of adults and other children and the expression of hostility and aggression. Finally, there is substantial negative correlation between achievement striving and the expression of aggression and hostility and the inhibition of seeking out of attention and proximity of adults and other children. The same constellation of relationships among outcome measures is found for the White Head Start graduates and for the Black Head Start graduates, suggesting two major dimensions. One dimension related to achievement and the other perhaps related to gregariousness.

8.2.4 White No Preschool Group

The correlations between the background measures and the outcome measures for the White children who have not participated in preschool are shown in Table 8.6. The low correlation between southeast versus other regions and age is conspicuous; however, only 5% of these children came from the southeast. The children in the southeast have fewer mothers who graduated from high school as indicated by the moderate negative correlation. A cluster of relationships is found between several of the socio-economic indicators: income, multiple-parent families, family size and mothers having graduated from high school. Income is higher for families with mothers who have graduated from high school and for multiple-parent families.

The correlations between the background measures and the outcome measures again show a low correlation between southeast versus other regions and the Wide Range Achievement Test; however, there is a substantial positive relationship between age and the Wide Range Achievement Test. In addition, several of the socio-economic variables are highly correlated with the Wide Range Achievement Test. Multiple-parent family, income and missing socio-economic data are all positively correlated with the Wide Range Achievement Tests. Few other substantial correlations between background measures and outcome measures are found: a positive relationship between achievement striving and income, and a moderate negative relationship between inhibition in the seeking out of adults and other children and income. The correlations between the outcome measures indicate a pattern similar to that found for the Black Head Start graduates and the White Head Start graduates: a substantial correlation between the Wide Range Achievement Test and achievement striving; a negative correlation between the inhibition of seeking out of adults and

Table 8.6

CORRELATIONS BETWEEN MEASURES FOR THE WHITE NO PRESCHOOL GROUP (PEARSON r's) (N = 178)

	BACKGROUND										OUTCOME					
	Southeast vs. Other	Age	Female vs. Male	Missing Sex	Mother Some College	Mother High School Graduate	Multiple vs. Single Parent Family	Income	Family Size	Missing SES	WRAT	Proximity and Attention Seeking	Achievement Striving	Popularity	Inconsistency or Inhibition in Attention Seeking	Aggression/Hostility
Southeast vs. Other	--															
Age	0.20*	--														
Female vs. Male	-0.10	0.07	--													
Missing Sex	0.11	-0.04	-0.45*	--												
Mother Some College	-0.04	-0.00	0.06	-0.03	--											
Mother High School Graduate	-0.22*	-0.14	-0.11	0.01	-0.57*	--										
Multiple vs. Single Parent Family	-0.01	0.00	-0.05	0.03	-0.05	0.09	--									
Income	-0.14	-0.10	-0.08	-0.11	0.06	0.28*	0.35*	--								
Family Size	0.13	0.02	-0.01	-0.03	-0.04	-0.02	0.27*	0.00	--							
Missing SES	0.00	-0.01	-0.03	0.07	-0.12	-0.05	-0.32*	-0.28*	-0.04	--						
WRAT	0.07	0.62*	-0.01	-0.06	-0.14	0.07	0.30*	0.24*	0.13	0.20*	--					
Proximity and Attention Seeking	0.07	-0.08	-0.06	0.00	0.12	-0.09	0.01	-0.01	0.00	0.00	-0.07	--				
Achievement Striving	-0.21*	-0.04	-0.14	0.07	0.09	0.18	0.03	0.23*	-0.04	-0.13	0.38*	-0.24*	--			
Popularity	-0.16	0.01	0.00	-0.08	0.02	-0.03	-0.02	0.05	0.05	0.00	0.05	-0.03	0.07	--		
Inconsistency or Inhibition in Attention Seeking	0.06	0.10	0.18	-0.06	-0.04	-0.16	-0.06	-0.23*	0.09	0.08	-0.30*	0.05	-0.47*	0.03	--	
Aggression/Hostility	0.13	0.07	-0.02	0.02	0.02	0.07	0.05	-0.08	0.00	0.01	-0.03	0.36*	-0.41*	0.00	0.25*	--

P ≤.01

other children and the Wide Range Achievement Test; a moderate negative correlation between the seeking out of adults and other children and achievement striving; a moderate positive correlation between the seeking out of adults and other children and the expression of aggression and hostility; substantial negative correlations between achievement striving and the inhibition of the seeking out of adults and other children; and a substantial negative correlation between the achievement striving and the expression of hostility and aggression. Finally, a positive correlation between the expression of hostility and aggression and inhibition of seeking out of adults and other children. This constellation of correlations is somewhat different from the Black Head Start graduates and the White Head Start graduates but the correlations are more similar than for the Black children who have not had preschool.

8.3 COMPARISON OF RELATIONSHIPS AMONG GROUPS

In general, the correlations across the four groups suggest moderate relationships between background measures and the Wide Range Achievement Test, and very weak relationships between background measures and the other outcome measures. Furthermore, the correlations within the Black groups and within the White groups appear to be relatively similar, with some exceptions. A more complete assessment of the similarity of correlations between the four groups requires the following information: 1) How much variation in the outcome scores do the background measures account for when considered all together?; and 2) Across the four groups, does each background measure relate to each respective outcome in the same direction and intensity? As noted in Figure 8.1, in order to implement an analysis of covariance, it is desirable that the adjusting variables account for significant portions of variance in outcomes, and that the relationships of the adjusting variables to outcomes be consistent across groups. Thus, if one were attempting to adjust for differences between groups on background measures, one would hope that the background measures account for at least 30% of the variation in the outcome measures. Furthermore, one would evaluate the relationships between the various outcome measures and the background measures in order to determine whether or not they were similar.

Table 8.7 presents the total percentage of the variation accounted for in each of the outcome measures for each of the groups by a regression model similar to that reported in Chapter Six which utilized all of the variables indicated in the previous tables. We find that substantial percentages of the variation in the Wide Range Achievement Test are related to the background measures.

Table 8.7

Percent of Variance Accounted for in the Outcome Measures by an SES Model*

Group / Measure	Black		White	
	Head Start	No Preschool	Head Start	No Preschool
WRAT	36%	53%	16%	25%
Achievement Striving	12%	19%	9%	18%
Aggression/ Hostility	3%	10%	8%	3%
Popularity	8%	14%	6%	5%
Proximity and Attention Seeking	7%	15%	9%	4%
Inconsistency or Inhibition in Attention Seeking	4%	15%	7%	12%

*A description of the regression model appears in Section 6.3.1.

However, none of the other measures are highly related to the background measures available. Thus, attempts to adjust for differences between groups on achievement striving, aggression and hostility, popularity, proximity and attention seeking and inconsistency or inhibition in attention seeking will be fruitless, since the background measures are only weakly predictive of these scores. The implementation of an adjustment strategy to compensate for pre-treatment group differences, given such weak relationships, would be inappropriate since little or no adjustments would be accomplished.

On the Wide Range Achievement Test, substantial predictive relationships are found for all of the groups with the exception of the White Head Start graduates, where only 16% of the variation is accounted for by the background measures. The other groups have substantially larger percentages. It is perhaps worth noting that the percentage of variation accounted for by the background measures is often less for the Head Start graduates than for the no preschool groups. For example, for the Black Head Start graduates, 36% of the variation in Wide Range Achievement Test scores is associated with background measures; whereas for the Black children without the benefit of preschool, fully 53% of the variation in Wide Range Achievement Test scores is associated with the background measures. It is possible that this attenuation of the import of background characteristics on scores may be a function of the children's preschool experience. If this were true, it could be hypothesized that the Head Start program had a salutary effect on the equality of educational opportunity for young children.

An exploration of the relationships between the individual background measures and the Wide Range Achievement Test may illuminate this issue. These relationships are presented in Table 8.8. The relationships presented represent the number of points of change in a Wide Range Achievement Test score associated with each of the variables (regression coefficients). The coefficients marked with an asterisk are those which are statistically different from zero ($P \leq .01$). For Black children, we find that Head Start graduates in the southeast score substantially higher than Black children elsewhere in the country, by nearly 9 points. However, for the Black children without preschool, there is no difference between the scores for children in the southeast versus elsewhere in the country independent of the child's age. For both the Black Head Start graduates and for the Black children without preschool, age and Wide Range Achievement Test scores are highly

Table 8.8

Relationships Between Background and the Wide Range Achievement Test Characteristics for Head Start and No Preschool Groups for Black and White Children

Group / Characteristic	Black				White			
	Head Start		No Preschool		Head Start		No Preschool	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Southeast vs. Other	8.89*	2.33	-1.42	3.53	12.11*	3.72	+2.95	4.84
Age	.62*	.12	1.09*	.18	.23	.17	.85*	.17
Female vs. Male	-1.01	1.81	-3.43	2.79	-1.49	2.22	-3.09	2.22
Missing Sex	-1.91	2.46	- .15	3.89	- .99	2.45	4.65*	2.41
Mother Some College	6.79*	3.83	-1.19	4.77	9.57*	3.12	11.84*	2.89
Mother High School Graduate	- .56	1.81	4.16	2.73	5.18*	2.16	4.01	2.59
Single vs. Multiple Parent Family	5.88*	1.99	9.72*	3.07	- .76	2.45	1.28	3.66
Income	- .04	.12	.19	.15	.08	.14	.24	.17
Family Size	- .35	.29	- .27	.47	- .69	.58	-1.16*	.58
Missing SES	1.55	1.74	4.29*	2.32	-2.50	2.69	1.17	3.06
Constant	-6.3		-44.16		27.54		-15.78	
TOTAL VARIANCE	36%		53%		16%		25%	

B = Regression Coefficient S.E. = Standard Error *Statistical Significance $P \leq .01$

related to scores, increasing approximately one point for each month of age. For the Black Head Start graduates, we find substantially higher Wide Range Achievement Test scores for children of mothers with some college versus other mothers -- a difference of nearly 7 points -- whereas for children without preschool there is no difference. For both groups, substantial differences between multiple-parent families versus single-parent families are indicated, with the children in multiple-parent families scoring approximately 6 points higher than those in single-parent families for the Head Start group versus approximately 10 points difference for the children with no preschool.[*]

The White groups' coefficients indicate higher scores for the White Head Start graduates in the southeast than for the White Head Start graduates elsewhere in the country. No regional difference obtains for the White group without preschool. There is a substantial positive relationship between age and Wide Range Achievement Test scores for the White children with no preschool, but no relationship for the White Head Start graduates.[**] For both the White Head Start graduates and the White children with no preschool, there are substantial relationships between having a mother with education beyond high school and the Wide Range Achievement Test scores; however, the difference is statistically significant only for the Head Start group. Finally, for the White group with no preschool there is a significant relationship between family size and Wide Range Achievement Test score.

The foregoing discussion of the relationships between background characteristics and child performance measures sought to determine the extent to which a traditional covariance adjustment strategy could be employed to refine the comparison of Head Start with non-Head Start groups. Such a technique would be appropriate where these relationships are similar for the two groups being compared. The data presented above, however, make it clear that such is not the case, either for the Black or the White group. Although the levels of background measures are similar for Black Head Start and non-Head Start groups, the relationships between these measures and the child measures are not similar. For the White groups, both the levels of background characteristics and their relationships to child performance scores are different. In the following sections, we will discuss Head Start and non-Head Start group comparisons based on different analytic techniques.

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[*] We find a significant relationship between the rate of missing data and the Wide Range Achievement Test within the Black no preschool group, indicating higher scores for children with more missing data.

[**] There is a substantial relationship between the missing sex information and the Wide Range Achievement Test for the children without preschool but no relationship for the White Head Start graduates.

8.4 AN HEURISTIC ADJUSTMENT STRATEGY: "VALUE ADDED"

The heterogeneity of relationships noted above violates a basic assumption of all regression approaches. However, since the Black Head Start graduates and children with no preschool have similar background characteristics, it is possible to estimate what the Head Start graduates' scores on the Wide Range Achievement Test might have been in the absence of preschool. This approach would provide an estimate of the "value added" to the Wide Range Achievement Test score as a consequence of participation in preschool. The approach would not be appropriate for the White group, since not only do the relationships between background and outcomes differ across the two White groups, but the two groups differ substantially on the level of background characteristics.

The "value added" by participation in Head Start may be estimated by computing predicted scores for the Black Head Start graduates utilizing the coefficients derived for the Black children with no preschool. That is, a predicted score may be obtained for each Head Start graduate using the background characteristics for each student and the relationships between the background characteristics and the outcome (regression coefficients from Table 8.8) obtained from the comparison group. Thus, from the coefficients in Table 8.8, if a student lived in the southeast, his predicted score would be debited 1.5 points. If the child were a male instead of a female, his score would be debited 3.5 points. If the child's mother had education beyond high school, his score would be debited one point. If the child's mother was a high school graduate, his score would be credited by 4 points. If the child came from a multiple-parent family versus a single-parent family, his score would be credited by 9.7 points and so on. Using these coefficients, it is possible to compute a predicted score as if the Head Start graduate had not participated in Head Start. The predicted score is assumed to be the score that the child would have obtained had s/he not participated in Head Start. The difference between the observed score which the child actually obtained and the predicted score can be computed. This difference, represents the "value added" to the child's test performance by the Head Start experience.

The reader should be reminded that the utilization of the comparison group coefficients for the prediction of scores of the Head Start graduates has the strong assumption that the relationships found for the children without preschool are the relationships that would have been obtained for the Head Start graduates had they not participated in preschool. This assumption cannot be tested with the data available. Thus, the method must be viewed as a heuristic or approximation approach.

Using this approach, we find that the Head Start graduates scored approximately 2.7 points higher on the Wide Range Achievement Test than they would have been expected to score. This 2.7 points is statistically different from zero (standard error = .89) suggesting that the Head Start graduates have benefited to some extent from their participation in Head Start. It is instructive to explore the differences in the "value added" from program participation across various additional indicators. Such an exploration will enable us to identify whether the Head Start program appears to be particularly beneficial for any subgroups. Variables of interest include income, single-parent versus multiple-parent families, and region of the country. Table 8.9 presents the distribution of "value added gains" for the Black Head Start graduates and for the Black children with no preschool for two income groups. In comparing families with income less than $5,200 to those above $5,200, we find that the Head Start graduates in the low income category have substantially larger "gains" than the Head Start graduates with incomes above $5,200. The children with no preschool show no differences between the income subgroups, as is appropriate to this analytic approach.

Table 8.10 presents the "value added gains" for Head Start graduates and for children with no preschool, for single-parent families, for two-adult families and for multiple-adult families. The table shows substantially higher scores for the Head Start graduates from single-parent families. Children from single-parent families attained scores on the average 6 points higher than would be expected of their non-Head Start peers, a difference which accounts for approximately one-half of the standard deviation of the Wide Range Achievement Test. None of the other groups showed differences which are statistically different from zero.

The gains for Black Head Start graduates and for Black children with no preschool for the northeast, the southeast, the southwest and the west are shown in Table 8.11. The Head Start differences in the southeast were substantially more positive than Head Start differences in any other region of the country, replicating the findings of the Westinghouse-Ohio Study of 1969.

The results of the "Value Added" comparisons of Black Head Start and Home group children on the Wide Range Achievement Test suggest that Head Start appears to have a beneficial effect on the academic school readiness of those children who needed it most, namely children from lower income, single-parent families. The incidence of this effect appeared greater in the southeast region. The rationale for this analysis was appropriate only for the Black groups. In the following section we examine, through yet another approach, the nature of the differences between Head Start and the Home groups for both Blacks and Whites.

Table 8.9

AVERAGE "VALUE ADDED GAINS" FOR BLACK HEAD START GRADUATES AND FOR BLACK CHILDREN WITH NO PRESCHOOL EXPERIENCE

	HEAD START			NO PRESCHOOL		
	Mean	SD	N	Mean	SD	N
Income $5,200 or Below	6.2	13.5	128	-.98	8.8	37
Income Above $5,200	.23	15.3	101	1.4	12.2	27
	3.59	14.6	229	.02	10.4	64

Table 8.10

AVERAGE "VALUE ADDED GAINS" FOR SINGLE VS. TWO ADULT VS. MULTIPLE ADULT HOUSEHOLDS

	HEAD START			NO PRESCHOOL		
	Mean	SD	N	Mean	SD	N
Single Parent	6.1	13.5	78	1.5	9.4	21
Two Adults	-.19	14.3	105	1.0	11.5	45
Multiple Adults	2.5	14.9	66	-3.3	6.9	14
	2.51	14.4	249	.40	10.3	80

Table 8.11

AVERAGE "VALUE ADDED GAINS" BY REGION OF THE COUNTRY FOR BLACK HEAD START GRADUATES AND FOR BLACK CHILDREN WITH NO PRESCHOOL

REGION	HEAD START			NO PRESCHOOL		
	Mean	SD	N	Mean	SD	N
Northeast	.59	13.5	49	-.73	11.85	12
Southeast	5.03	14.1	163	.00	9.10	46
Southwest	-5.1	14.5	31	-3.75	9.71	16
West	1.95	14.2	26	6.27	12.1	11
	2.75	14.4	269	.00	10.25	85

8.5 FORCED MATCH COMPARISONS

The analytic strategy outlined in Figure 8.1 is arranged in a certain hierarchy. The analysis at the top of the figure allows an inference about the "treatment" effect which is relatively safe with respect to competing hypotheses. The covariance analysis with a pretest and posttest allows an inference about the intervening treatment which is also quite sound. When we shift, however, out of the domain of experimental logic and into the area of a single data-point survey, the door is left open for many competing hypotheses to encroach upon the inference we wish to make in attributing observed group differences to the effect of a Head Start experience which antedated the measures. Up to a certain point, more sophisticated statistical adjustments may be used to sift out competing hypotheses within a weak experimental design. Ultimately, however, the inferences we make must stand or fall on the logic of the measurement design. The "forced match comparisons" identified at the bottom of the hierarchy in Figure 8.1 are weakest both with respect to statistical sophistication and experimental logic.

The rationale for the forced match comparisons is to test for differences between Head Start and Home group means under a variety of conditions. For example, to what extent do the two groups differ in different regions, at different levels of mother's education, for relatively lower or higher income categories, or for boys and girls? No assumptions are made about the shape of the distributions of these various categories. The only requirement is that enough subjects are available in each cell to provide an estimate of a mean score. The objective in selecting the conditions or categories in which group differences are examined is to identify areas of particular policy interest or conditions which may be associated with preexisting group differences in performance. The result of many such comparisons is a mapping of the conditions under which Head Start group means differ (or fail to differ) from the non-Head Start scores. Group differences which tend to appear consistently under a variety of conditions, even under conditions such as income level differences which are typically associated with child performance differences, lend credence to the inference that these differences may be attributable to the program experience. Where no consistent pattern of group differences appears, the results must remain ambiguous.

8.5.1 Identification of Matching Categories

For the purpose of the direct comparisons reported here, we wished to study more closely those children and families for whom Head Start was primarily intended, namely the lower-income segment of the population. A typical family of four receiving welfare benefits may have a maximum annual income of approximately $6800, although this figure may vary somewhat across regions. This income level delineates the lower third of the White group within the present sample, and about the lower two-thirds of the Black group.

Given that the group of interest is low-income, there are many other background characteristics which are often associated with child test performance, such as subcategories of income level, mother's education level, family composition and child sex. Examining the data for Head Start - No Preschool group differences within these categories provides a fuller understanding of conditions associated with potential Head Start program effects. In addition, group differences across geographic region provide an additional source of variation which contributes to the understanding of potential Head Start effects.

The outcomes analyzed in the direct group comparisons included the academic and socio-emotional scores reported above: Total Wide Range Achievement Test; Achievement Striving; Seeking Adults and Children; Dependency Conflict; and Absence. In addition, the parent attitudinal and parent-child interaction factors were analyzed to examine potential differences in the home learning environment between Head Start and non-Head Start groups. The discussion in the foregoing sections detailed the differences between Blacks and Whites in background characteristics and the relationships of these features to child achievement. Thus, separate analyses were conducted for Blacks and Whites.

8.5.2 Results of Direct Group Comparisons with Forced Matching

The results of the breakdowns of scores for Head Start versus No Preschool groups within background categories are summarized in Table 8.12 for Blacks and in Table 8.14 for Whites. The means and standard deviations for these groups are presented in Tables 8.13 and 8.15 respectively. The entries in the summary tables indicate whether the group differences exceeded approximately one-fourth of a standard deviation unit. Head Start means

Table 8.12

SUMMARY OF HEAD START - NO PRESCHOOL GROUP DIFFERENCES WITHIN DIRECT COMPARISON CATEGORIES FOR BLACKS FROM FAMILIES WITH INCOMES LESS THAN $6800

	Background Variables			Child Scores						Parent Attitudes				Parent-Child Interactions			
	Age	Income	Mother's Education	MBAT	Proximity-Seeking	Dependency Conflict	Hostility/Aggression	Achievement Striving	Absence	School Dissatisfaction/ Alienation	School Dissatisfaction/ Pupils	Need to Avoid Educational Failure	Locus of Control	Verbal Exposure	Satisfaction with Child's Schooling	Expectation for Child	Child as Independent Student
Sex																	
Male	0	0	0	+	+	-	+	-	-	0	0	0	0	+	0	+	0
Female	0	-	0	+	+	-	+	+	0	0	0	0	0	+	+	+	+
Region																	
Northeast*																	
Southeast	0	0	0	+	+	0	+	0	0	0	0	0	0	+	0	0	0
Southwest	0	0	0	+	+	0	+	+	-	-	-	-	0	+	+	+	+
West*																	
other's Education																	
Less Than High School	0	-	0	+	0	0	+	0	0	0	0	0	0	+	0	+	0
High School	0	-	0	0	+	-	+	0	-	+	0	0	0	+	+	+	0
More Than* High School																	
amily Composition																	
Single Parent	0	0	0	+	+	0	+	0	-	-	0	-	+	+	0	+	0
Two Adults	0	0	0	+	+	-	+	0	0	+	0	0	0	+	0	+	0
More Than Two Adults	0	0	+	+	+	0	0	+	0	0	0	0	0	+	0	+	0
ncome																	
Less Than $5200	0	0	0	+	+	-	+	0	-	0	0	0	0	+	0	+	0
More Than $5200*																	

*Too few cases.
0 = No group difference
[illegible]

Table 8.13

MEANS OF CHILD SCORES AND PARENT FACTORS OF HEAD START AND NO PRESCHOOL GROUPS
WITHIN VARIOUS BACKGROUND CONDITIONS FOR BLACKS FROM FAMILIES WITH INCOMES LESS THAN $6800

Cell Key:
No Preschool
Head Start

		Background Variables			Child Scores								Parent Attitudes				Parent-Child Interactions	
		Age (in months)	Income	Mother's Education (years)	WRAT	Proximity-Seeking	Dependency Conflict	Hostility/Aggression	Achievement Striving	Absence (days)	School Dissatisfaction/Alienation	School Dissatisfaction/Pupils	Need to Avoid Educational Failure	Locus of Control	Verbal Exposure	Satisfaction with Child's Schooling	Expectation for Child	Child as Independent Student
	S.D.	8.3	3900	2.3	15.5	11.4	4.8	9.2	8.9	6.3	.28	.30	.23	.40	.55	.51	.77	.66
	N																	
Sex																		
Male	30	72.5	3012	10.9	40.0	33.8	13.7	15.3	49.7	6.3	1.25	1.34	1.77	1.67	2.03	3.59	3.29	3.46
	70	75.5	3219	10.3	46.2	37.2	12.1	19.0	46.9	3.6	1.21	1.37	1.75	1.62	2.23	3.64	3.53	3.31
Female	25	72.5	5875	9.5	40.0	31.4	13.2	13.3	45.5	3.8	1.25	1.38	1.72	1.45	2.09	3.54	3.45	3.23
	96	73.0	3592	10.1	47.4	36.4	11.9	17.3	48.4	3.1	1.30	1.45	1.73	1.57	2.25	3.72	3.62	3.50
Region																		
Northeast	*																	
Southeast	42	77.6	3406	9.7	45.6	33.8	12.8	13.6	46.8	3.5	1.28	1.43	1.75	1.53	2.01	3.64	3.41	3.36
	129	77.7	3498	9.9	51.5	35.8	11.9	18.6	46.5	3.4	1.34	1.44	1.76	1.55	2.20	3.64	3.49	3.32
Southwest	19	66.1	3175	10.9	29.8	29.1	15.3	13.6	44.0	8.5	1.30	1.43	1.81	1.53	2.02	3.49	3.02	3.11
	23	65.0	3363	11.2	35.2	35.3	15.3	17.9	48.4	3.1	1.16	1.32	1.70	1.67	2.29	3.76	3.69	3.47
West	*																	
Mother's Education																		
Less Than High School	49	72.4	4385	9.1	39.0	32.7	12.8	14.4	46.3	5.2	1.32	1.47	1.78	1.50	2.05	3.64	3.30	3.17
	131	74.8	3429	9.0	47.2	34.4	12.3	17.8	46.0	4.1	1.32	1.47	1.76	1.55	2.19	3.67	3.49	3.32
High School	22	71.1	5197	12.0	43.2	32.1	13.6	14.0	48.5	6.1	1.07	1.35	1.71	1.66	2.01	3.47	3.21	3.40
	73	71.2	3853	12.0	42.4	38.8	12.0	18.2	48.7	4.2	1.17	1.29	1.67	1.74	2.26	3.61	3.64	3.42
More Than High School	*																	
Family Composition																		
Single Parent	30	70.1	3881	10.3	35.0	31.7	13.8	13.8	43.3	9.9	1.34	1.42	1.83	1.43	1.94	3.52	3.23	3.32
	82	72.0	3096	10.3	39.9	36.9	12.8	17.4	46.5	4.9	1.24	1.41	1.71	1.64	2.12	3.62	3.42	3.26
Two Adults	28	71.7	3669	10.6	42.3	32.8	13.4	13.3	50.3	2.8	1.16	1.37	1.72	1.68	2.08	3.57	3.25	3.23
	68	72.9	4323	10.4	47.5	35.7	12.3	16.7	48.9	3.6	1.28	1.40	1.72	1.68	2.22	3.63	3.47	3.39
More Than Two Adults	14	74.4	3605	9.4	46.8	30.9	11.8	15.4	46.6	4.8	1.30	1.43	1.72	1.59	2.09	3.63	3.44	3.29
	50	73.7	4137	10.3	51.4	33.8	11.2	17.4	49.1	4.0	1.25	1.39	1.73	1.55	2.35	3.65	3.84	3.40
Income																		
Less Than $5200	47	70.1	2899	10.5	35.1	30.0	14.2	13.2	46.1	5.9	1.25	1.37	1.77	1.63	1.99	3.59	3.09	3.34
	143	72.0	3074	10.3	44.1	35.3	12.6	18.5	47.0	3.9	1.25	1.43	1.72	1.64	2.21	3.68	3.55	3.39
More Than $5200	*																	

*Too few cases.

greater by one-fourth standard deviation than No Preschool group means are indicated by (+), and the reverse condition by (-), while group differences not exceeding one-fourth standard deviation are indicated by (0).

Caution must be used in interpreting these results too strongly. Group differences obtained by a method as weak as these direct comparisons may be subject to the effects of many unknown confounding variables. These direct comparisons are worth considering as tendencies of group differences only to the extent that the differences are consistent across many sets of variables which themselves could account for a portion of the confounding. A partial check of potentially confounding group differences is provided by the inclusion of group differences on child's age, family income and mother's education for each category. The logic for this analysis is quite simple: If a group difference persists across many heterogeneous conditions, it tends to gain credibility. Such phenomena deserve closer examination in future studies.

8.5.2.1 Direct Comparisons for Low Income Blacks

Considering first the results for Blacks, on the Wide Range Achievement Test, there appears in Table 8.12 a consistent tendency for the Head Start mean to exceed the No Preschool mean. This difference obtains across variations in region, child sex, family composition and for low-income, lowest-education categories. For the female groups and the less-than-high school groups, this difference obtains even though the Head Start group has a lower mean income than the No Preschool group. Subject to further confirmation, it would appear that Head Start has a positive effect on the academic performance of low-income Blacks at school entry.

In the area of achievement striving as rated by the teacher, the results are more mixed. Head Start boys are rated lower than their No Preschool group peers in attention to task, initiating and completing activities on their own, and demonstrating involvement with their school work. Head Start girls, however, are rated higher than their No Preschool group peers in these activities. Apart from this program-by-sex interaction, the only other cells indicating differences are the southwest region and the multiple adult families, wherein Head Start exceeded the No Preschool group means.

On the scales labeled "Dependency" the types of behaviors being rated actually refer to the child's seeking for closeness, contact and attention from adults and children. This proximity-seeking behavior may reflect emotional dependence in some children, but in others it may be more associated with sociability and executive competence skills. Similarly, the proximity-seeking may be related to either negative or positive behaviors on the part of the child. The results of the direct comparisons suggest that the Head Start children consistently are rated higher in these activities than their No Preschool group peers. The interpretation of this difference, whether it reflects gregariousness, emotional attachment, dependency, sociability or executive competence remains to be established in more detailed studies.

The scores for Dependency Conflict are related to the proximity-seeking behaviors. Conflict is inferred by the extent to which the child is inhibited, indecisive or inconsistent in showing the behaviors characterized above. Higher scores on Dependency Conflict may suggest confusion or immaturity, while lower ratings may reflect more self-confidence, clarity and decisiveness. In the analyses for the Black group, both boys and girls from Head Start are rated lower than their No Preschool group peers. Lower conflict scores for Head Start children are also indicated in cells of the high school graduate mothers, the two-parent families and the low-income groups. These differences suggest a potential Head Start effect which should be examined further.

The scores for the Hostility scale include teachers' ratings of the child's verbal and physical abuse of others as well as the display of anger and resentment. Black Head Start children tend to be rated higher on this scale than their No Preschool group peers consistently across a variety of background conditions. The incidence of higher Head Start ratings on this scale seems to form a pattern with the other measures. Of the ten cells examined in this analysis, eight demonstrate a pattern of effects as follows: Higher achievement, higher proximity-seeking, higher hostility and equal or lower dependency conflict. Considering the definitions given the scales above, there is some ambiguity to the interpretation of this pattern. However, it suggests that the Head Start children have been "activated" academically and socially more than their No Preschool group peers. This reading of the data suggests a picture of Head Start children as more gregarious, less inhibited, more academically able and more assertive than their peers with no preschool experience. Combined with this interpretation are the data on absence. Of the ten cells analyzed, five produced lower absence means for the Head Start group. Four of these five absence differences were associated with the "activation" pattern characterized here, suggesting that such Head Start children tend to miss fewer days of school. Such a pattern, if it can be confirmed and replicated in other better-controlled studies, suggests positive Head Start effects for low-income Blacks.

The direct comparison analysis for low income Black parents produced more mixed results than the analysis of child scores. Very few group differences were obtained on the parental attitudes factors. There is a tendency in the southwest region for Head Start parents to express more school alienation and dissatisfaction, however, this appears to be an isolated phenomenon. The lack of consistent findings in this area suggests no discernible Head Start effect on parent attitudes toward education and the schools.

In the group comparisons of parent-child interactions, the Black Head Start parents consistently report higher levels of verbal exposure for their children through books available and reading. In addition, the Head Start parents consistently report higher levels of educational expectation for their children than do the parents of the No Preschool group. These differences obtain in spite of many variations in background conditions. Thus, better-controlled studies of Head Start effects on parents should seek to confirm this inference. No systematic tendencies were obtained in the analysis of the school and pupil satisfaction factors.

8.5.2.2 Direct Comparisons for Low Income Whites

Considering next the analysis of low-income White children, there appear from Table 8.14 to be fewer group differences. Of the ten group comparisons on the Wide Range Achievement Test (WRAT), only two cells indicated group differences: Head Start males exceeded their No Preschool group peers; and Head Start children with mothers who did not complete high school scored higher than their No Preschool group comparison. The latter contrast was obtained even though the Head Start group had lower incomes than the comparison group. These differences appear too tenuous to support an inference of Head Start effects for low-income Whites in the academic area.

The breakdowns of scores for proximity-seeking behaviors suggest that Head Start children tend to be rated higher than their No Preschool group peers in this area. This difference obtained for all cells except

Table 6.14

SUMMARY OF HEAD START - NO PRESCHOOL GROUP DIFFERENCES WITHIN
DIRECT COMPARISON CATEGORIES FOR WHITES FROM FAMILIES WITH INCOMES LESS THAN [illegible]

	Background Variables			Child Scores						Parent Attitudes					Parent-Child Interactions		
	Age	Income	Mother's Education	WRAT	Proximity-Seeking	Dependency Conflict	Hostility/Aggression	Achievement Striving	Absence	School Dissatisfaction/ Alienation	School Dissatisfaction/ Pupils	Need to Avoid Educational Failure	Locus of Control	Verbal Exposure	Satisfaction with Child's Schooling	Expectation for Child	Child as Independent Student
Sex																	
Male	0	0	0	+	+	-	+	0	0	0	0	-	0	+	+	0	+
Female	0	-	0	0	0	+	0	0	-	0	+	0	-	+	-	+	-
Region																	
Northeast	0	0	0	0	+	0	+	0	-	0	+	-	-	0	0	0	-
Southeast*																	
Southwest*																	
West	0	0	0	0	+	-	+	0	-	0	-	0	0	0	0	0	-
Mother's Education																	
Less Than High School		-	0	+	+	-	0	+	-	-	0	0	-	0	+	0	+
High School		-	0	0	+	0	+	0	-	+	-	-	0	0	-	0	-
More Than* High School																	
Family Composition																	
Single Parent		0		0	+	-	+	-	-	+	0	-	0	+	-	0	-
Two Adults		-	-	0	+	-	+	0	-	0	0	0	-	-	+	0	0
More Than* Two Adults																	
Income																	
Less Than $5200		0	0	0	+	-	0	-	-	0	0	0	0	0	0	-	0
More Than $5200		0	-	0	0	-	+	+	-	0	0	-	-	-	-	+	-

Too few cases.
0 = No group difference
+ = No Preschool mean more than .25 S.D. units higher than Head Start mean
- = Head Start mean more than .25 S.D. units higher than No Preschool mean

Table 6.23

Means of Child Scores and Parent Factors of Head Start and No Preschool Groups within Various Background Conditions for Whites from Families with Incomes Less Than [illegible]

Cell Key:
No Preschool
Head Start

	N	Background Variables: Age (in months)	Background Variables: Income	Background Variables: Mother's Education (years)	Child Scores: PSI	Child Scores: Proximity-Seeking	Child Scores: Dependency Conflict	Child Scores: Hostility/Aggression	Child Scores: Achievement Striving	Child Scores: Absence (Days)	Parent Attitudes: School Dissatisfaction/Alienation	Parent Attitudes: School Dissatisfaction/Pupils	Parent Attitudes: Need to Avoid Educational Failure	Parent Attitudes: Locus of Control	Parent-Child Interactions: Verbal Exposure	Parent-Child Interactions: Satisfaction with Child's Schooling	Parent-Child Interactions: Expectation for Child	Parent-Child Interactions: (Child as Independent Student)
	S.D.	7.2	1381	3.1	25.5	12.0	5.3	9.4	5.5	5.1	0.22	0.29	0.26	0.38	0.40	0.45	0.48	0.73
Sex	N																	
Male	28	68.9	4360	11.2	38.7	30.6	16.4	14.7	45.6	7.6	1.08	1.26	1.50	1.88	2.17	3.62	3.50	3.24
	44	68.7	4629	11.4	44.9	37.2	12.6	18.3	47.3	3.9	1.06	1.29	1.47	1.86	2.38	3.88	3.47	3.30
Female	12	69.3	5429	11.5	42.8	37.6	11.9	16.8	45.1	6.7	1.18	1.23	1.56	1.97	2.38	3.88	3.18	3.09
	43	70.1	3958	10.7	44.1	37.5	14.2	15.3	46.1	6.7	1.11	1.29	1.55	1.81	2.47	3.72	3.35	3.46
Region																		
Northeast		67.5	4485	11.2	41.3	34.9	13.6	13.4	45.3	7.6	1.08	1.26	1.63	1.94	2.37	3.78	3.37	3.42
		68.0	4150	10.9	38.4	38.2	13.6	17.9	45.6	4.8	1.10	1.31	1.53	1.81	2.36	3.71	3.37	3.25
Southeast*																		
Southwest*																		
West		70.1	6156	11.8	47.6	31.9	14.2	14.8	49.2	6.1	1.01	1.32	1.56	2.08	2.44	3.89	3.33	3.57
		70.5	6320	11.3	47.8	38.7	12.8	18.6	48.3	3.8	1.08	1.21	1.47	1.86	2.47	3.79	3.35	3.43
Mother's Education																		
Less Than High School	21	70.8	4732	9.6	38.4	34.4	15.7	17.7	42.9	8.2	1.17	1.28	1.64	1.86	2.18	3.51	3.06	3.23
	69	70.9	3858	9.3	41.9	37.9	14.1	17.7	46.9	4.1	1.12	1.32	1.58	1.72	2.29	3.69	3.17	3.38
High School	14	67.8	6907	12.0	46.5	33.8	13.5	14.4	47.2	5.9	1.04	1.33	1.58	2.08	2.47	3.96	3.31	3.76
	55	70.3	4307	12.0	46.1	38.3	13.1	18.8	47.5	3.2	1.08	1.23	1.47	1.83	2.47	3.77	3.45	3.32
More Than* High School																		
Family Composition																		
Single Parent	10	70.7	3983	10.3	45.8	33.4	15.5	12.6	49.3	8.1	1.08	1.28	1.65	1.98	2.17	4.03	3.43	3.58
	65	70.6	3783	11.3	46.7	37.2	14.1	16.8	45.7	4.7	1.08	1.25	1.49	1.82	2.43	3.75	3.36	3.31
Two Adults	30	68.8	4835	11.5	44.2	33.2	14.4	15.6	46.6	7.8	1.11	1.26	1.54	1.96	2.48	3.63	3.29	3.38
	61	71.3	4410	10.5	44.8	37.6	12.7	19.4	47.8	4.3	1.08	1.20	1.53	1.81	2.34	3.75	3.27	3.36
More Than* Two Adults																		
Income																		
Less Than $5200	29	70.4	3762	10.7	46.1	38.6	15.9	15.3	48.1	8.4	1.09	1.29	1.58	1.79	2.20	3.74	3.58	3.42
	99	70.9	3725	10.7	46.2	36.4	14.8	16.8	45.7	5.2	1.11	1.28	1.53	1.82	2.35	3.78	3.27	3.32
More Than $5200	12	69.2	5962	11.4	37.2	41.3	13.1	16.5	43.8	7.7	1.10	1.31	1.58	2.08	2.27	3.89	3.08	3.63
	21	70.1	5916	10.8	48.9	43.0	9.1	16.3	47.8	2.9	1.10	1.27	1.46	1.71	2.23	3.72	3.31	3.27

females and the income group above $5200. In addition, the ratings on the Hostility/Aggression scale also tended to be higher for Head Start than No Preschool children. In no cell was the Head Start group rated lower than the No Preschool group on these two measures. The Dependency Conflict ratings tended to be lower for Head Start than No Preschool children, with the exception of females. Thus, there appears in the socio-emotional area a pattern of group differences for low-income Whites which resembles that found for low-income Blacks. The pattern may suggest Head Start children who are more expressive, less inhibited, more assertive and more willing to approach others than is true for their No Preschool peers. In addition, the tendency for White Head Start children to miss fewer days of school than their No Preschool comparison group appears quite consistent across all types of background conditions.

The pattern of group differences on the parent attitudes and parent-child interaction factors for low-income Whites appears inconsistent across the various background conditions. Many of the differences obtained exceeded the criterion of one-fourth standard deviation unit; however, their directions change within and across categories. In the absence of consistent trends with this weak method of analysis, inferences about Head Start group differences in parents' attitudes are not justified. More controlled studies are needed to identify the conditions which are systematically associated with attitudes and parent-child interactions in low-income Whites.

8.6 CONCLUSIONS

In this chapter we attempted to answer two questions: 1) Does the posttest-only research design which gathers data during kindergarten on Head Start graduates and their No Preschool peers produce data which are appropriate for discerning the effects of Head Start?; and 2) Does Head Start appear to benefit children?

The answer to the first question is quite clear. In our introduction we reviewed a number of criteria requisite for the use of an ex post facto analysis. Primarily, background measures must be available which account for a significant proportion of the variance in outcome scores. Only with such variance accounted for, can we examine potential treatment effects apart from the real hypothesis of pre-existing group differences. In the current sample, this criteria was met only for the academic performance test, and only for the Black Head Start and No Preschool groups. Significant variance was accounted for on this measure also for the White No Preschool group, but the failure of the regression model of background characteristics to account for variance in the White Head Start group obviated the use of covariance adjustment analysis. For no groups was the criterion met on the socio-emotional measures.

Since the reliabilities on the academic and socio-emotional measures reported in the Appendix are all in the range of .90, it is likely that, had there been available a pretest on these measures (from a pre-Head Start point), sufficient variance in the outcome scores could have been accounted for. Thus, a number of covariance adjustment techniques would have been at our disposal. The absence of this condition in the present study renders the posttest-only analysis strategy relatively inefficient for the purpose of determining, unambiguously, potential Head Start effects.

Concerning the second question, has Project Head Start helped the social competence of Head Start graduates in their first year of elementary school? The regression analysis of academic scores for Blacks identified a group difference in favor of the Head Start group, a difference which could not be attributed to a wide range of socio-economic background characteristics. Does this mean the difference is attributable to the children's participation in Head Start? Having ruled out rival hypotheses concerning socio-economic demographic differences between the groups, we are closer to such an inference for Blacks. The rival hypothesis which remains to be checked, the examination of which lies outside the bounds of the current sample data, is that the group differences are due to group selection factors. The reasoning is that, in the absence of random assignment of groups to the Head Start program, those children who did actually attend, came from homes in which the desire to gain the benefits of such a program was stronger. Thus, according to this hypothesis, a certain attitudinal set on the parents' part would account for the children's higher academic performance in the Head Start group.

From the descriptive analysis of the Head Start group, reported in Chapter Six, we can indirectly examine the merits of this rival hypothesis. A number of parent attitudes concerning education and their children, as well as several reports of parent-child interactions in areas relevant to school readiness were analyzed to determine their relevance to the measures of social competence. On the academic tests, these factors accounted for a significant but relatively small portion of variance over and above that already accounted for by the demographic characteristics. The fact that they added only a small percentage to the variance accounting suggests that the rival hypothesis of preselection bias, at least with respect to the measurement of this constellation of parent attitudes, is a relatively weak hypothesis. Accepting the ambiguities inherent to the current data, we are tempted to conclude that Head Start contributed in some measureable way to the academic performance of Black children. The closer examination of these differences reported in this section suggests that this effect was particularly observable for low-income Blacks, and for Blacks in the southeast region.

What of the other areas of social competence outside of the academic measure? The supplementary analysis reported at the end of this section examined the data for Blacks and Whites from families with incomes less than $6800 for both Head Start and No Preschool groups. In a number of successive comparisons, in which the groups were matched with respect to a background condition, there tended to appear a certain pattern, more distinct for Blacks but also detectable for Whites. The Head Start group, compared to the No Preschool group, tended to be rated by teachers as 1) higher in seeking proximity, contact and attention from children and adults, 2) lower in demonstrating conflict, vacillation and confusion in these behaviors, 3) higher in displays of aggressive behavior, and 4) lower in school absence. For Blacks, this pattern was also accompanied by higher academic performance. Once again, these group differences could be attributable to pre-existing group differences. However, this pattern tended to obtain even within subcategories of potentially relevant group differences such as income level, mother's education level or family composition. The consistency of this pattern suggests a more pervasive group difference, quite possibly attributable to the child's attendance in Head Start. Data such as this should be interpreted as suggestive of a Head Start effect, but as requiring further confirmation in better-controlled studies.

In addition, the meaning of the pattern of scores characterized above remains to be examined in depth. Our interpretation is that these scores indicate children who are more expressive, less inhibited and perhaps more sure of themselves socially than their peers who remained at home during the preschool years. This expressiveness is demonstrated both in gregarious, friendly behavior as well as in assertive or aggressive behavior. In part, this pattern resembles the characteristic of Head Start children's eagerness and readiness to learn, reported by Wolff and Stein (1966). Also, such a pattern is reminiscent of data reported by Wallach and Kogan (1965) indicating that children high in ability and high in creativity tended not only toward higher academic performance, but also toward more seeking out of others and more "disruptive" attention-seeking behavior. Depending upon one's view of children, this type of behavior may be seen as interfering with a teacher's immediate classroom management, or as facilitating the child's adaptation to new children and learning environments. To the extent that the latter is true, Project Head Start may be said to have helped the social competence of its young clientele.

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PSYCHOMETRIC APPENDIX

The data in this Appendix include item difficulties, item-total correlations, and frequency distributions of scores for the measures used in the analysis. For each measure there is first listed the item statistics, followed by the score distributions. The organization of the Appendix is as follows:

I. Wide Range Achievement Test
   - Total Score
   - Reading
   - Math
   - Spelling
   - Perceptual-motor Coding

II. Values Inventory for Children
   - Asocial Behavior
   - Achievement Motivation
   - Me First
   - Conformity
   - Sociability

III. Schaefer Classroom Behavior Inventory
   - Task Orientation
   - Extroversion/Introversion
   - Hostility/Tolerance
   - Popularity
   - Expectations for Pupil

IV. Beller Rating Scales
   - Autonomous Achievement Striving
   - Aggression
   - Adult Dependency
   - Child Dependency
   - Dependency Conflict

V. Combined Factors from Schaefer and Beller Scales
   - Hostility - Aggression
   - Achievement Striving
   - Dependency Total

VI. Days Absent

Item Difficulties and Coefficient Alphas for
Total Wide Range Achievement Test

Item	Item Mean	S.D.	Item Total Correlation
COPYING MARKS	.86475	.34210	.35212
COPYING MARKS	.89167	.31089	.36596
COPYING MARKS	.73026	.43972	.48406
COPYING MARKS	.72198	.44816	.45876
COPYING MARKS	.86650	.33805	.41050
COPYING MARKS	.73513	.44140	.46093
COPYING MARKS	.64058	.47998	.43073
COPYING MARKS	.62242	.48493	.50717
COPYING MARKS	.63431	.48177	.43360
COPYING MARKS	.74953	.43342	.44991
COPYING MARKS	.58735	.49246	.48140
COPYING MARKS	.62242	.48493	.46852
COPYING MARKS	.46713	.49907	.47301
COPYING MARKS	.53475	.49895	.51892
COPYING MARKS	.52160	.49969	.54755
COPYING MARKS	.29054	.45416	.43417
COPYING MARKS	.41202	.49235	.47900
COPYING MARKS	.37383	.48397	.47949
NAME SPELLING	.77395	.41840	.50935
SPELL GO	.16594	.45405	.41336
SPELL CAT	.19537	.46990	.42084
SPELL IN	.10081	.35291	.35527
SPELL BOY	.06324	.29257	.34121
SPELL AND	.08265	.35847	.35916
SPELL WILL	.04321	.25283	.27877
SPELL MAKE	.01315	.15577	.17196
SPELL HIM	.02093	.21216	.23950
LAST DOT CORRECTLY POINTED TO	14.24796	4.64867	.40818
READ THREE	.87727	.32823	.52425
READ FIVE	.84721	.35989	.55170
READ SIX	.78585	.41036	.58290
READ SEVENTEEN	.34762	.48956	.58236
READ FOURTY ONE	.09455	.29269	.26371
THREE FINGERS	.89668	.30447	.43076
EIGHT FINGERS	.52786	.49938	.53841
NINE OR SIX	.67815	.46733	.44003
FOURTY ONE OR TWENTY EIGHT	.45022	.49767	.25264
THREE PENNIES	.59487	.49107	.37159
THREE APPLES	.18347	.38717	.35268
NINE MARBLES	.12586	.33180	.25233
ONE PLUS ONE VERBAL	.26487	.44140	.52575
ONE PLUS ONE WRITTEN	.25924	.43835	.55826
FOUR MINUS ONE	.07639	.26571	.39263
SIX PLUS TWO	.10695	.31168	.45930
FIVE MINUS THREE	.05573	.22947	.35366

Item Difficulties and Coefficient Alphas for Total Wide Range Achievement Tests (Continued)

Item	Item Mean	S.D.	Item Total Correlatio
FIRST LETTER IN OWN NAME	.75391	.43086	.51511
SECOND LETTER IN OWN NAME	.68503	.46465	.55970
RECOGNIZE A	.94302	.23188	.19359
RECOGNIZE R	.94051	.23661	.25432
RECOGNIZE Z	.94678	.22455	.27134
RECOGNIZE H	.96556	.18241	.23797
RECOGNIZE I	.87163	.33460	.32533
RECOGNIZE Q	.93112	.25333	.26328
RECOGNIZE S	.93738	.24235	.29601
RECOGNIZE E	.95667	.19911	.23947
RECOGNIZE B	.93989	.23777	.26304
RECOGNIZE O	.93601	.24122	.30507
NAME B	.73826	.43972	.56967
NAME A	.71634	.45091	.61890
NAME O	.75830	.42825	.59536
NAME E	.59737	.49058	.64200
NAME S	.69081	.45892	.64121
NAME R	.59662	.49033	.62711
NAME H	.56794	.49552	.65302
NAME T	.60802	.48835	.66240
NAME P	.55229	.49741	.64514
NAME I	.52473	.49954	.66291
NAME U	.49029	.50006	.64200
NAME Z	.54415	.49820	.65477
NAME Q	.52974	.49927	.63266
READ CAT	.29681	.45699	.53535
READ SEE	.13776	.34475	.42231
READ RED	.17157	.37713	.46298
READ TO	.16406	.37044	.47397
READ BIG	.09455	.29269	.40471
READ WORK	.05322	.22455	.28931
READ BOOK	.08391	.27734	.36205
READ EAT	.03569	.18558	.30563
READ WAS	.03694	.18868	.32178
READ HIM	.04634	.21028	.37935
READ HOW	.02379	.15246	.29692
READ THEM	.03256	.17754	.35500
READ OPEN	.02505	.15632	.31829
READ LETTER	.01753	.13129	.26586
Total Scale N = 1597	52.17	17.66	Standardized Item Alpha: .96

Frequencies for Wide Range Achievement Test Total

Score	N	%
0	3	0
1	1	0
8	1	0
9	2	0
10	2	0
11	3	0
12	7	0
13	5	0
14	7	0
15	7	0
16	10	1
17	9	1
18	12	1
19	14	1
20	16	1
21	17	1
22	15	1
23	12	1
24	12	1
25	13	1
26	26	2
27	23	1
28	17	1
29	21	1
30	19	1
31	28	2
32	24	2
33	27	2
34	24	2
TOTAL		

Frequencies for Wide Range Achievement Test Total
(Continued)

Score	N	%
35	21	1
36	23	1
37	15	1
38	31	2
39	20	1
40	33	2
41	34	2
42	42	3
43	41	3
44	30	2
45	33	2
46	40	3
47	31	2
48	51	3
49	39	2
50	42	3
51	35	2
52	35	2
53	35	2
54	30	2
55	37	2
56	49	3
57	37	2
58	41	3
59	48	3
60	31	2
61	36	2
62	20	1
63	30	2
TOTAL		

Frequencies for Wide Range Achievement Test Total (Continued)

Score	N	%
64	28	2
65	24	2
66	12	1
67	13	1
68	12	1
69	16	1
70	11	1
71	9	1
72	13	1
73	7	0
74	8	1
75	8	1
76	4	0
77	6	0
78	5	0
79	5	0
80	9	1
82	5	0
83	5	0
84	2	0
85	2	0
86	3	0
89	2	0
90	1	0
91	1	0
TOTAL	1578	100.0

Item Difficulties and Coefficient ALPHA for WRRD (Reading)

Item	Item Mean	S.D.	Item Total Correlatio
First Letter in Own Name	.75	.43	.53
Second Letter in Own Name	.69	.46	.59
Recognize A	.96	.19	.07
Recognize R	.95	.20	.16
Recognize Z	.96	.17	.18
Recognize H	.96	.12	.13
Recognize I	.88	.31	.24
Recognize Q	.94	.22	.22
Recognize S	.95	.21	.23
Recognize E	.97	.14	.14
Recognize B	.96	.19	.16
Recognize O	.95	.21	.24
Name B	.73	.44	.62
Name A	.71	.44	.65
Name O	.75	.42	.62
Name E	.58	.49	.72
Name S	.69	.46	.69
Name R	.59	.49	.72
Name H	.56	.49	.74
Name T	.60	.48	.72
Name P	.54	.49	.73
Name I	.52	.49	.73
Name U	.48	.50	.75
Name Z	.53	.49	.73
Name O	.52	.49	.72
Read CAT	.31	.46	.58
Read SEE	.13	.33	.49
Read RED	.17	.38	.52
Read TO	.17	.37	.53
Read BIG	.09	.29	.48
Read WORK	.04	.21	.40
Read BOOK	.08	.27	.47
Read EAT	.03	.19	.35
Read WAS	.04	.19	.39
Read HIM	.05	.22	.44
Read HOW	.02	.16	.34
Read THEM	.03	.19	.39
Read OPEN	.03	.17	.37
Read LETTER	.01	.13	.30
TOTAL SCALE	20.13	7.41	Alpha = .93

Frequencies for Wide Range Achievement Test Subtest
Reading Total

Score	N	%
0	6	0
1	1	0
2	1	0
3	2	0
4	3	0
5	4	0
6	10	1
7	10	1
8	19	1
9	45	3
10	87	6
11	65	4
12	78	5
13	61	4
14	52	3
15	52	3
16	58	4
17	45	3
18	50	3
19	53	3
20	41	3
21	57	4
22	59	4
23	76	5
24	98	6
25	176	11
26	102	6
27	70	4
28	42	3
29	43	3

Frequencies for Wide Range Achievement Test Subtest Reading Total (continued)

Score	N	%
30	21	1
31	17	1
32	10	1
33	13	1
34	6	0
35	17	1
36	5	0
37	9	1
38	6	0
39	8	1
Missing	407	20.5
TOTAL	1985	100.0

Item Difficulties and Coefficient ALPHA for WRMA (Math)

Item	Item Mean	S.D.	Item Total Correlation
Last Dot Correctly Pointed To	6.66	2.41	.33
Read Three	.88	.31	.47
Read Five	.86	.34	.48
Read Six	.79	.40	.53
Read Seventeen	.39	.48	.53
Read Fourty One	.08	.28	.29
Three Fingers	.91	.27	.38
Eight Fingers	.53	.49	.52
Nine or Six	.68	.46	.40
Fourty One or Twenty Eight	.46	.49	.26
Three Pennies	.61	.48	.34
Three Apples	.18	.39	.40
Nine Marbles	.12	.33	.32
One Plus One Verbal	.27	.44	.51
One Plus One Written	.26	.43	.56
Four Minus One	.08	.27	.40
Six Plus Two	.11	.32	.47
Five Minus Three	.06	.23	.37
			Standardized Item
Total Scale N =	14.02	4.99	Alpha = .70

Frequencies for Wide Range Achievement Test Subtest

Math Total

Score	N	%
0	11	1
1	6	0
2	14	1
3	19	1
4	25	2
5	19	1
6	36	2
7	43	3
8	52	3
9	65	4
10	72	5
11	75	5
12	102	6
13	112	7
14	145	9
15	160	10
16	145	9
17	134	8
18	77	5
19	73	5
20	63	4
21	44	3
22	33	2
23	27	2
24	16	1
25	10	1
TOTAL	1578	100.0

Item Difficulties and Coefficient ALPHA for WRSPSP (Spelling)

Item	Item Mean	S.D.	Item Total Correlation
1. Name Spelling	.79	.41	.20
2. Spell GO	.14	.34	.61
3. Spell CAT	.16	.37	.62
4. Spell IN	.08	.28	.66
5. Spell BOY	.06	.23	.54
6. Spell AND	.06	.24	.62
7. Spell WILL	.03	.18	.51
8. Spell MAKE	.01	.08	.33
9. Spell HIM	.02	.14	.45
			Standardized Item
Total Scale N = 1167	1.34	1.46	Alpha = .78

Frequencies for Wide Range Achievement Test Subtest
Spelling: Words

Score	N	%
0	336	21.3
1	909	57.6
2	134	8.5
3	69	4.4
4	47	3.0
5	40	2.5
6	21	1.3
7	10	0.6
8	7	0.4
9	5	0.3
TOTAL	1578	100.0

Item Difficulties and Coefficient ALPHA for WRSPMK (Coding)

Item		Item Mean	S.D.	Item Total Correlation
COPYING MARKS				
1.	—	.88	.32	.48
2.	|	.90	.29	.51
3.	/	.76	.42	.59
4.	\	.74	.44	.51
5.	○	.89	.32	.54
6.	X	.74	.44	.54
7.	┘	.67	.47	.52
8.	V	.64	.48	.60
9.	┐	.66	.47	.56
10.	+	.78	.41	.53
11.	∧	.61	.49	.59
12.	┌	.65	.48	.61
13.	△	.49	.50	.56
14.	⊐	.55	.50	.64
15.	⊔	.54	.50	.66
16.	▽	.30	.46	.53
17.	⊏	.43	.50	.58
18.	⊓	.39	.49	.56
TOTAL SCALE		11.6[illegible]	4.99	Alpha = .91

Frequencies for Wide Range Achivement Test Subtest
Copying Marks

Score	N	%
0	70	4
1	23	1
2	16	1
3	44	3
4	35	2
5	44	3
6	55	3
7	73	5
8	71	4
9	86	5
10	86	5
11	107	7
12	102	6
13	124	8
14	116	7
15	118	7
16	135	9
17	129	8
18	144	9
TOTAL	1578	100.0

Item Difficulties and Coefficient ALPHA for Asocial Behavior Scale from the Values Inventory for Children (X Booklet)

Item	Item Mean	S.D.	Item Total Correlation
Water on Man	2.11	1.39	.44
Jump on Furniture	2.41	1.38	.55
Food on Head	1.95	1.34	.56
Halloween	2.55	1.40	.56
Cake	2.76	1.42	.55
Steal Toy	2.07	1.34	.53
Litter	2.30	1.38	.62
Push in Water	2.48	1.49	.56
Fruit on Fence	2.21	1.40	.54
			Standardized Item
Total Scale N = 1195	20.84	8.26	Alpha = .84

Frequencies for the Asocial Behavior Scale
Scores from the Values Inventory for Children (N Booklet)

Score	N	%
0	13	1.0
1	5	0.4
2	1	0.1
4	6	0.5
5	1	0.1
6	4	0.3
7	10	0.8
8	16	1.3
9	85	6.8
10	21	1.7
11	40	3.2
12	72	5.8
13	19	1.5
14	34	2.7
15	57	4.6
16	29	2.3
17	38	3.1
18	63	5.1
19	42	3.4
20	33	2.7
21	71	5.7
22	45	3.6
23	46	3.7
24	66	5.3
25	45	3.6
26	48	3.9
27	59	4.7
28	36	2.9
29	38	3.1
30	47	3.8

Frequencies for the Asocial Behavior Scale
Scores from the Values Inventory for Children (N Booklet)

Score	N	%
31	26	2.1
32	36	2.9
33	17	1.4
34	8	0.6
35	10	0.8
36	58	4.7
TOTAL	1245	100.0

Item Difficulties and Coefficient ALPHA for Achievement Motivation Scale from the Values Inventory for Children (X Booklet)

Item	Item Mean	S.D.	Item Total Correlatio
Work at Desk	2.83	1.46	.30
Class	3.04	1.24	.42
Read in Group	2.99	1.26	.53
Class	2.78	1.33	.51
Teacher Help	2.68	1.34	.54
Spell on Board	3.02	1.32	.56
Go to School	2.91	1.30	.56
Read in Chair	2.59	1.37	.51
			Standardized Item
Total Scale N = 1195	22.84	6.70	Alpha = .78

Frequencies for the Achievement Motivation Scale Scores From the Values Inventory for Children (X Booklet)

Score	N	%
0	13	1.0
1	2	0.2
2	3	0.2
4	5	0.4
5	3	0.2
6	2	0.2
7	4	0.3
8	14	1.1
9	4	0.3
10	11	0.9
11	8	0.6
12	24	1.9
13	17	1.4
14	19	1.5
15	25	2.0
16	31	2.5
17	38	3.1
18	43	3.5
19	58	4.7
20	65	5.2
21	58	4.7
22	76	6.1
23	86	6.9
24	70	5.6
25	77	6.2
26	76	6.1
27	55	4.4
28	78	6.3
29	80	6.4
TOTAL		

Score	N	%
30	37	3.0
31	38	3.1
32	123	9.9
TOTAL	1245	100.0

Item Difficulties and Coefficient ALPHA for the "Me First" Scale from the Values Inventory for Children (Y Booklet)

Item	Item Mean	S.D.	Item Total Correlation
Cookie			.44
Ice Cream			.35
Cake			.37
Wagon Push			.50
Swing			.51
Jump Rope			.35
Line			.37
Talk to Group			.42
Take Last One			.44
			Standardized Item
Total Scale N = 110 (Based on preliminary data sample)			Alpha = .74

Frequencies for "Me First" Scores
from the Values Inventory for Children (Y Booklet)

Score	N	%
0	20	2
1	4	0
2	9	1
3	6	0
4	3	0
5	7	1
6	6	0
7	8	1
8	21	2
9	76	6
10	51	4
11	78	6
12	158	13
13	253	20
14	241	19
15	181	15
16	77	6
17	26	2
18	20	2
TOTAL	1245	100.0

Item Difficulties and Coefficient ALPHA for the Social Conformity Scale
from the Values Inventory for Children (Y Booklet)

Item	Item Mean	S.D.	Item Total Correlation
Movie			.22
Talk in Class			.40
Doing Job			.59
Stay in Bed			.32
Ball in House			.18
Clothesline			.41
Heat			.02
Talk in Bed			.46
			Standardized Item
Total Scale N = 110 (Based on preliminary data sample)			Alpha = .61

Frequencies for Conformity Scores
from the Values Inventory for Children (Y Booklet)

Score	N	%
0	18	1.4
1	7	0.6
2	13	1.0
3	9	0.7
4	16	1.3
5	13	1.0
6	16	1.3
7	46	3.7
8	133	10.7
9	196	15.7
10	280	22.5
11	209	16.8
12	131	10.5
13	69	5.5
14	51	4.1
15	21	1.7
16	17	1.4
TOTAL	1245	100.0

Item Difficulties and Coefficient ALPHA for Sociability Scale from the Values Inventory for Children (Y Booklet)

Item	Item Mean	S.D.	Item Total Correlation
Group Picnic			.32
Group Talk			.34
Sand Castle			.22
Dancing			.17
Walk in Group			.23
Group Play			.27
			Standardized Item
Total Scale N = 110			Alpha = .51

Frequencies for Sociability Scores
from the Values Inventory for Children (Y Booklet)

Score	N	%
0	18	1.4
1	6	0.5
2	7	0.6
3	7	0.6
4	16	1.3
5	31	2.5
6	104	8.4
7	140	11.2
8	283	22.7
9	366	29.4
10	187	15.0
11	63	5.1
12	17	1.4
TOTAL	1245	100.0

Item Difficulties and Coefficient ALPHA for Task Orientation Factor from Schaefer Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlation
1. Pays attention when there are other things going on	3.33	1.35	.81
2. Stays with a job until it's finsihed	3.58	1.37	.83
3. Goes from one thing to another	3.63	1.38	.61
4. Watches teacher carefully	3.50	1.36	.82
5. Becomes involved in what he is doing	3.38	1.37	.77
Total Scale N = 1479	17.43	5.84	Standardized Item Alpha = .91

Frequencies for Task Orientation
Scores from Schaefer Teacher Rating Scales

Score	N	%
5	2	0
6	2	0
7	5	0
8	16	1
9	63	4
10	72	5
11	75	5
12	83	6
13	99	7
14	91	6
15	98	7
16	73	5
17	123	9
18	117	8
19	107	7
20	134	9
21	219	15
22	22	2
23	11	1
24	7	0
25	21	1
TOTAL	1440	100.0

Item Difficulties and Coefficient ALPHA for Extroversion/Introversion Factor from Schaefer Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlation
1. Tries to be with another person or group	3.77	1.16	.65
2. Likes activities with others	4.02	1.16	.67
3. Enjoys being with others	4.15	1.07	.70
4. Watches others, but doesn't join	4.07	1.15	.51
5. Makes the first friendly move	3.11	1.33	.65
			Standardized Item
Total Scale N = 1479	19.11	4.55	Alpha = .83

Frequencies for Extroversion/Introversion Scores
From Schaefer Teacher Rating Scales

Score	N	%
5	1	0
6	1	0
7	2	0
8	2	0
9	16	1
10	45	3
11	51	4
12	54	4
13	72	5
14	89	6
15	109	8
16	124	9
17	151	10
18	161	11
19	180	12
20	174	12
21	174	12
22	22	2
23	8	1
24	10	1
25	6	0
TOTAL	1452	100.0

Item Difficulties and Coefficient ALPHA for Hostility/Tolerance Factor From Schaefer Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlation
1. Slow to forgive when offended	1.74	1.07	.64
2. Stays angry after an argument	1.55	.97	.72
3. Complains if he can't have his own way	1.65	1.04	.70
4. Gets angry at waiting his turn or sharing	1.63	1.02	.75
5. Must have what he wants when he wants it	1.73	1.09	.76
			Standardized Item
Total Scale N = 1479	8.31	4.26	Alpha = .88

Frequencies for Hostility/Tolerance Scores
From Schaefer Teacher Rating Scales

Score	N	%
5	529	36
6	163	11
7	122	8
8	110	8
9	110	8
10	97	7
11	58	4
12	36	2
13	45	3
14	35	2
15	20	1
16	31	2
17	20	1
18	18	1
19	12	1
20	6	0
21	10	1
22	11	1
23	4	0
24	7	0
25	6	0
TOTAL	1450	100.0

Item Difficulties and Coefficient ALPHA for Popularity Factor From Schaefer Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlation
1. Ignored by peers	4.15	1.17	.54
2. Seems rejected by classmates	4.43	1.02	.50
3. Appears popular with classmates	3.39	1.37	.43
Total Scale N = 1479	11.98	2.78	Standardized Item Alpha = .68

Frequencies for Popularity Scores
From Schaefer Teacher Rating Scales

Score	N	%
3	10	0.7
4	75	5.2
5	165	11.4
6	382	26.4
7	523	36.1
8	138	9.5
9	68	4.7
10	40	2.8
11	21	1.5
12	5	0.3
13	2	0.1
14	5	0.3
15	14	1.0
TOTAL	1457	100.0

Item Difficulties and Coefficient ALPHA for Expectations for Child's Academic and Behavior Potential Factor from Schaefer Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlation
Although it may be difficult to assess, we would like your overall estimate of the child's academic potential	3.25	1.22	.56
What is your overall estimate of this child's potential classroom conduct?	3.46	1.11	.56
Total Scale N =1479	6.71	2.06	Standardized Item Alpha = .72

Frequencies for Expectations for Academics and Behavior Scores
From Schaefer Teacher Rating Scales

Score	N	%
2	28	1.9
3	62	4.2
4	127	8.7
5	166	11.3
6	266	18.2
7	241	16.5
8	270	18.4
9	166	11.3
10	138	9.4
TOTAL	1464	100.0

Item Difficulties and Coefficient ALPHA for Autonomous Achievement Striving Factor from Beller Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlation
1. Derives satisfaction from his work	4.80	1.65	.74
2. Carries out routine tasks by himself	5.35	1.66	.73
3. Overcome by obstacles in his environment	4.57	1.73	.75
4. Takes initiative for his own activity	4.84	1.72	.75
5. Completes an activity	4.94	1.78	.77
Total Scale N = 1479	24.48	7.19	Standardized Item Alpha = .90

Frequencies for Autonomous Achievement Striving Scores from Beller Teacher Rating Scales

Score	N	%
5	3	0
6	2	0
7	7	0
8	11	1
9	14	1
10	13	1
11	21	1
12	16	1
13	35	2
14	31	2
15	46	3
16	39	3
17	50	3
18	41	3
19	35	2
20	33	4
21	57	4
22	39	3
23	72	5
24	54	4
25	90	6
26	70	5
27	85	6
28	63	4
29	87	6
30	72	5
31	90	6
32	70	5
33	76	5
TOTAL		

Score	N	%
34	47	3
35	80	5
TOTAL	1469	100.0

Item Difficulties and Coefficient ALPHA for Aggression Factor from Beller Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlatio
1. How often he threatens others	2.03	1.58	.85
2. How often he derogates others	2.10	1.58	.83
3. Destroys or damages property of other children	1.81	1.40	.81
4. Attacks others	1.86	1.52	.82
			Standardized Item
Total Scale N = 1479	7.79	5.49	Alpha = .92

Frequencies for Aggression Scores
From Beller Teacher Rating Scales

Score	N	%
4	579	40
5	149	10
6	135	9
7	93	6
8	78	5
9	53	4
10	55	4
11	43	3
12	41	3
13	32	2
14	25	2
15	15	1
16	15	1
17	14	1
18	19	1
19	14	1
20	14	1
21	15	1
22	5	0
23	9	1
24	18	1
25	9	1
26	4	0
27	9	1
28	10	1
TOTAL	1453	100.0

Item Difficulties and Coefficient ALPHA for Adult Dependency Factor from Beller Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlatio
1. How often he seeks help from teacher	3.14	1.53	.52
2. Seeks recognition from teacher	3.72	1.64	.70
3. Seeks physical contact from teacher	2.86	1.72	.69
4. Seeks attention	3.55	1.73	.73
5. Seeks to be near others	3.44	1.67	.70
			Standardized Item
Total Scale N = 1479	16.70	6.61	Alpha = .85

Frequencies for Adult Dependency Scores
From Beller Teacher Rating Scales

Score	N	%
5	35	2
6	17	1
7	40	3
8	37	3
9	58	4
10	68	5
11	85	6
12	67	5
13	91	6
14	80	6
15	110	8
16	75	5
17	78	5
18	67	5
19	75	5
20	58	4
21	57	4
22	44	3
23	59	4
24	41	3
25	40	3
26	34	2
27	34	2
28	28	2
29	13	1
30	12	1
31	11	1
32	10	1
33	7	0
TOTAL		

Score	N	%
35	11	1
TOTAL	1446	100.0

Item Difficulties and Coefficient ALPHA for Child Dependency Factor from Beller Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlation
1. Seeks help from other children	2.92	1.54	.40
2. Seeks recognition from other children	3.44	1.51	163
3. Seeks physical contact with other children	3.38	1.71	.67
4. Seeks attention from other children	3.74	1.66	.76
5. Seeks to be near other children	4.38	1.66	.65
Total Scale N = 1479	17.86	6.20	Standardized Item Alpha = .82

Frequencies for Child Dependency Scores
From Beller Teacher Rating Scales

Score	N	%
5	21	1
6	18	1
7	30	2
8	20	1
9	44	3
10	40	3
11	52	4
12	58	4
13	71	5
14	74	5
15	112	8
16	83	6
17	79	5
18	77	5
19	106	7
20	79	5
21	86	6
22	66	5
23	58	4
24	56	4
25	61	4
26	42	3
27	36	2
28	21	1
29	21	1
30	21	1
31	11	1
32	9	1
33	7	0
TOTAL		

Score	N	%
34	1	0
35	2	0
TOTAL	1462	100.0

Item Difficulties and Coefficient ALPHA for Dependency Conflict Factor from Beller Teacher Rating Scales

Item	Item Mean	S.D.	Item Total Correlatio
1. Indirectness	3.37	1.81	.50
2. Inconsistency A	2.95	1.69	.57
3. Inconsistency B	2.89	1.61	.52
4. Inhibition	2.90	1.79	.47
			Standardized Item
Total Scale N = 1479	12.12	5.12	Alpha = .73

Frequencies for Dependency Conflict Scores
From Beller Teacher Rating Scales

Score	N	%
4	89	6
5	39	3
6	83	6
7	73	5
8	98	7
9	63	4
10	128	9
11	80	6
12	147	10
13	95	7
14	106	7
15	84	6
16	98	7
17	49	3
18	49	3
19	44	3
20	34	2
21	31	2
22	24	2
23	6	0
24	12	1
25	6	0
26	3	0
27	2	0
28	9	1
TOTAL	1452	100.0

Item Difficulties and Coefficient Alphas for Combined Schaefer Hostility Scale/Beller Aggression Scale Factor

Item	Item Mean	S.D.	Item Total Correlation
Slow to forgive when offended	1.74	1.07	.59
Stays angry after an argument	1.55	.97	.65
Complains if he can't have his own way	1.65	1.04	.62
Gets angry at waiting his turn or sharing	1.63	1.02	.73
Must have what he wants when he wants it	1.74	1.09	.71
How often does the child threaten others?	2.03	1.58	.80
How often does the child derogate others?	2.10	1.58	.79
How often does the child destroy or damage the property of other children?	1.81	1.40	.77
How often does the child attack others physically?	1.86	1.52	.75
			Standardized Item
Total Scale N = 1479	16.11	8.87	Alpha = .92

Frequencies for Combined Schaefer Hostility Scale and Beller Aggression Scale Scores

Score	N	%
9	357	25.0
10	135	9.5
11	109	7.6
12	93	6.5
13	80	5.6
14	74	5.2
15	52	3.6
16	45	3.2
17	37	2.6
18	43	3.0
19	36	2.5
20	36	2.5
21	30	2.1
22	24	1.7
23	29	2.0
24	18	1.3
25	19	1.3
26	20	1.4
27	23	1.6
28	11	0.8
29	24	1.7
30	16	1.1
31	10	0.7
32	11	0.8
33	5	0.4
34	7	0.5
35	6	0.4
36	6	0.4
37	5	0.4
TOTAL		

Score	N	%
38	5	0.4
39	12	0.8
40	8	0.6
41	4	0.3
42	6	0.4
43	5	0.4
44	1	0.1
45	5	0.4
46	3	0.2
47	1	0.1
48	6	0.4
49	3	0.2
51	3	0.2
52	1	0.1
53	2	0.1
TOTAL	1426	100.0

Item Difficulties and Coefficient Alphas for Combined Task Orientation and Expectations Scales from Schaefer Teacher Ratings and Autonomous Achievement Striving Scale from Beller Teacher Ratings

Item	Item Mean	S.D.	Item Total Correlation
Pays attention when other things are going on	3.33	1.35	.77
Stays with a job until finished	3.58	1.37	.88
Goes from one thing to another	3.63	1.38	.58
Watches teacher carefully	3.50	1.36	.79
Becomes involved in what he is doing	3.38	1.37	.79
Academic potential	3.25	1.22	.75
Potential classroom conduct	3.46	1.11	.65
Derives satisfaction from his work	4.80	1.65	.80
Carries out routine tasks by himself	5.35	1.66	.67
Overcomes obstacles in his environment	4.57	1.73	.70
Takes initiative for his own activity	4.84	1.72	.69
Completes an activity	4.94	1.78	.87
Total Scale N = 1479	48.63	13.92	Standardized Item Alpha = .94

Frequencies for Combined Task Orientation and Expectations Scales From Schaefer Teacher Ratings and Autonomous Achievement Striving Scale From Beller Teacher Ratings

Score	N	%
26	6	0.4
27	2	0.1
28	5	0.4
29	6	0.4
30	16	1.1
31	9	0.6
32	11	0.8
33	22	1.5
34	22	1.5
35	31	2.2
36	30	2.1
37	35	2.5
38	32	2.3
39	35	2.5
40	31	2.2
41	36	2.5
42	33	2.3
43	39	2.7
44	42	3.0
45	47	3.3
46	44	3.1
47	49	3.5
48	49	3.5
49	55	3.9
50	50	3.5
51	41	2.9
52	46	3.2
53	53	3.7
54	56	3.9
TOTAL		

Score	N	%
55	68	4.8
56	42	3.0
57	68	4.8
58	45	3.2
59	48	3.4
60	57	4.0
61	44	3.1
62	55	3.9
63	44	3.1
64	7	0.5
65	3	0.2
66	2	0.1
67	4	0.3
TOTAL	1985	100.0

Item Difficulties and Coefficient Alphas for Combined Adult and Child Dependency Scales From Beller Teacher Ratings

Item	Item Mean	S.D.	Item Total Correlation
How often does the child seek help from the teacher?	3.14	1.53	.51
How often does the child seek recognition from the teacher?	3.72	1.64	.68
Seeks physical contact with the teacher?	2.86	1.72	.62
Seeks attention from teacher and other adults?	3.55	1.73	.73
Seeks to be near others (teacher and other adults)?	3.44	1.67	.65
Seeks help from other children?	2.92	1.54	.48
Seeks recognition from other children?	3.44	1.51	.64
Seeks physical contact with other children?	3.38	1.71	.62
Seeks attention from other children?	3.74	1.66	.67
Seeks to be near other children?	4.39	1.66	.56
Total Scale N = 1479	34.56	11.49	Standardized Item Alpha = .88

Frequencies for Absence Scores
From Schaefer Teacher Rating Scales

Score	N	%
0	281	19
1	205	14
2	195	13
3	150	10
4	115	8
5	98	7
6	92	6
7	55	4
8	45	3
9	41	3
10	34	2
11	28	2
12	21	1
13	18	1
14	15	1
15	13	1
16	11	1
17	8	1
18	6	0
19	5	0
20	7	0
21	6	0
22	8	1
23	1	0
24	5	0
25	1	0
26	1	0
27	1	0
30	2	0
TOTAL		

Score	N	%
32	2	0
33	3	0
37	1	0
38	1	0
40	2	0
55	2	0
TOTAL	1479	100.0